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CONSULTATION-LIAISON PSYCHIATRY

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Foreword

Consultation-Liaison Psychiatry : The Crucial Interface between Psychiatry and the Rest of Medicine

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This special issue of the Journal of Mental Health & Human Behaviour is devoted to Consultation-Liaison (C-L) Psychiatry. C-L psychiatrists are specialists in the care of psychiatric disorders in the medically ill. This specialized field is also now referred to as Psychosomatic Medicine, which became an official psychiatric subspecialty in the U.S. in 2003.[1] The major professional organizations of C-L psychiatrists in the U.S. and Europe are respectively the Academy of Psychosomatic Medicine, and the newly reorganized European Association for Psychosomatic Medicine.2

C-L psychiatrists have special expertise in the diagnosis and treatment of psychiatric illness in complex medically ill patients.3 They treat four types of patients: comorbid psychiatric-medical illnesses complicating each other's management; psychiatric disorders directly resulting from a primary medical condition or its treatment, such as delirium, dementia or other secondary mental disorders; complex illness behaviour such as somatoform and functional disorders; and acute psychopathology admitted to medical-surgical units, such as attempted suicides. C-L psychiatrists work as consultants in general medical hospitals, in medical-psychiatric inpatient units, and integrated with primary care or medical specialities to provide collaborative care.

The nature of the field of C-L psychiatry and the broad scope of C-L psychiatrists' expertise is very well reflected in this special issue of the Journal of Mental Health & Human Behaviour. The issue begins with papers that review conceptual issues, models and principles of C-L practice, as well practice guidelines and the various roles C-L psychiatrists play. The next section covers the key clinical topics of delirium, depression in the medically ill, psychoendocrinology, psychooncology in the medically ill. The final section contains a series of case reports. In my experience, some of the clinically most useful publications in the C-L psychiatry literature are interesting case reports, which is well-illustrated in this issue as well.

This is an exciting time for C-L psychiatry and Psychosomatic Medicine, not only in North America and Europe, but in many other countries including India as this issue demonstrates so we.

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Preface

It has been a matter of great pleasure to compile and edit the supplement issue of *Journal of Mental Health and Human Behaviour* devoted to the theme of consultation liaison psychiatry. The supplement issue comprises of review articles authored by various experts in the field, summarizing the available knowledge and evidence base. These are followed by several case discussions relevant to specific consultation and liaison settings.

To set the background for this supplement, the Post Graduate Development Programme for the year 2012 (XI PGDP-2012) was organized by the Department of Psychiatry, PGIMS, Rohtak under the aegis of Indian Psychiatric Society-North Zone at Kausali between 25-27 May, 2012. The theme of the programme was consultation liaison psychiatry. The programme involves lectures, intensive training sessions and interactions of the residents and faculty members. The programme was deemed to be successful in sensitizing and training the residents in various aspects of consultation liaison psychiatry. It was felt that it would be useful to disseminate the theoretical knowledge and clinical discussions to various mental health professionals of North India. Therefore, the experts were invited to contribute the review articles and case discussions which were earlier presented during the course of PG development programme. As the official journal of Indian Psychiatric Society- North Zone, the *Journal of Mental Health and Human Behaviour* decided to bring a supplement issue dedicated to consultation liaison psychiatry.

We wish to acknowledge the support of Indian Psychiatric Society – North Zone in bringing out the supplement. We applaud the efforts of Department of Psychiatry, PGIMS, Rohtak and acknowledge their support towards the supplement issue. We thank all the experts for their contributions in the supplement issue.

Finally, we are immensely honoured to have the foreword for this supplement issue written by Professor JL Levenson, who is an international authority in consultation liaison psychiatry. We hope that the supplement shall be useful for all mental health professionals who are involved in providing care to patients in various medical settings.

Rajesh Sagar

Editorial

Consultation-liaison psychiatry: The way forward

Rajesh Sagar, Raman Deep Pattanayak

The recent findings from World Mental Health Survey[1] conducted by World Health Organization (WHO) across several countries has reaffirmed that common mental **disorders** are a significant contributor to global mental health burden, with prevalence estimates of 18.1-36.1% for anxiety, mood, externalizing and substance use disorders. Neuropsychiatric disorders contribute to nearly 1/5th of global disease burden.[2] Yet, worldwide, these disorders remain inadequately diagnosed and treated, with only a small percentage presenting to specialist psychiatric settings. Majority of the common and milder disorders continue to be seen in the non-specialist, medical settings. Further, the mental disorders are nearly twice as common in the context of physical disorders, suggesting the need for greater linkages between care for mental and physical disorders.

From a public health perspective, C-L psychiatry has the potential to contribute towards reducing the burden of mental disorders in both developed and developing countries.[3] An important way forward is a greater involvement of C-L psychiatrists in primary care service development.[4] The C-L psychiatrists are in a unique position to develop effective models of collaborative care with primary care physicians. It involves looking beyond the tertiary care settings and adopting leadership role in this direction. As noted by Bauer [3], one of the best-studied C–L models is the collaborative- care model for primary-care depression management, developed out of the outpatient C–L service at the University of Washington. Active ingredients in the collaborative-care model include effective screening, training and sensitization of staff and regular supervision by a psychiatrist.[3]

From a service delivery perspective, consultation and liaison services need to play a larger and more visible role across all the medical settings, from pediatric to geriatric age groups. Any particular aspect of C-L e.g. psycho-oncology or pediatric C-L may be developed with greater time and investment, depending on available resources, needs and commitment of respective departments. There is a need for better vertical integration between inpatient and outpatient services.[5] The services of C-L psychiatry have been restricted mostly to ward settings even in teaching hospitals, and should be extended to the outdoor sector. It has the added advantage that the therapeutic alliance formed by the C-L team can be carried over in future consultations e.g.the C-L team at department of psychiatry, A.I.I.M.S. routinely delivers the out-patient services to patients after their discharge from medical or surgical wards, which ensures a smooth transition and facilitate patient retention.

As the psychiatric comorbidity frequently remains undetected, physicians and nurses from the medical departments should be empowered to identify the patients requiring psychological

help. Each contact by the C-L psychiatrists gives an opportunity to sensitize the medical staff towards the mental health issues. C-L psychiatry should continue to work towards gradual and complete acceptance of psychiatry in the medical settings. There should be regular academic meetings and case discussions involving residents and faculty members of C-L psychiatry as well as concerned medical or surgical department.

From a research perspective, the C-L psychiatry in premier teaching hospitals should move beyond the basic clinical services and emphasize on developing the cost-effective models of care for India, utilizing the available resources in mental health. There should be a focus on the development of specific non-pharmacological interventions which can be delivered to patients in medical settings e.g. the adaptation of the patient to medical disorder, hospitalization/s and long term compliance may need special attention in C-L psychotherapy for chronic illnesses.[6] It needs to be emphasized that many C-L patients may not meet the diagnostic criteria, and a large proportion may need support for their psychological issues rather than psychiatric illnesses. Similarly, the safety, efficacy and effectiveness of the various psychoactive medications need to be studied specifically in the context of medical disorders. Any controversial issues, for example usage of antipsychotic agents in delirium, must be resolved by means of carefully planned research studies. The evidence must ultimately govern the clinical practice guidelines, and C-L psychiatry must follow the principles of evidence-based medicine. The need to improve C-L psychiatry services and training in Indian context has been highlighted earlier, and so far only a limited amount of research is available from Indian settings.[7,8] There is a need to strengthen the teaching, services as well as research aspects of C-L psychiatry in India. There is also a need to involve other mental health professionals in the process of consultation and liaison.

Lastly, there should be an increasing emphasis on cost-effectiveness studies for various models of C-L psychiatry. Such studies can inform the administrators and policy makers in order to facilitate the allocation of requisite resources. The studies which can demonstrate the advantages and cost-effectiveness of delivering the psychiatric services specifically at the site of the patient are needed.[9]

The C-L psychiatry is still an evolving branch and has a tremendous scope to contribute towards the global mental health challenge. There are many ways in which psychiatrists can contribute to development of consultation and liaison as a sub-specialty. C-L psychiatrists can take an initiative to improve the primary care services or improve upon the existing C-L infrastructure in tertiary care settings. They can guide the teaching and training of future generation of psychiatrists, mentoring them to take a leadership role in this subspecialty. C-L psychiatrists can take up the research activities specific to C-L settings and develop cost-effective models of care in medical settings. While there is a long journey ahead, such initiatives are definitely the way forward.

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Review article

Consultation-liaison psychiatry: conceptual issues

Savita Malhotra, Susanta Kumar Padhy

Abstract

The basic concept of Consultation and Liaison Psychiatry (C-L psychiatry) involves consultation and liaison. It is a multidisciplinary team work where the psychiatrist serves as consultants to medical / surgical non-psychiatric colleagues, consults physician or surgeon regarding patients in medical or surgical settings, provides follow-up psychiatric treatment as and when needed, imparts teaching and conducts research in the general hospital psychiatric unit. C-L psychiatry has long been considered the practical (clinical) arm of psychosomatic medicine and has postdated psychosomatic medicine by more than a century. In principle, over the period, various schools of thoughts emerged: Psychoanalytical or psychodynamic, Psychophysiological, Psychobiological and biopsychosocial approach, the most accepted one. To increase the cost-effectiveness, the C-L Psychiatrist must rate the complexity of the case, number of diagnosis, amount of time spent and take the hospital administration into confidence. Models focus on providing services, research, teaching and training in different permutations and combinations. We describe in detail the model followed in Postgraduate Institute of Medical Education And Research, Chandigarh. Intervention by a C-L Psychiatrist increases overall outcome of physical illness, adherence to treatment, psychological well being and likely to take life events more positively. Over the years C-L Psychiatry has extended his antenna to special settings like oncology, intensive care units, transplant units etc. By and large the ethical and legal issues involved in C-L Psychiatry are same as that in general adult psychiatry.

Keywords: *consultation, liaison, C-L Psychiatry, conceptual issues*

The mind and the body are more than married, for they are most intimately united; and when one suffers, the other sympathizes.

— Lord Chesterfield

Introduction

Consultation-liaison (C-L) psychiatry is the study, practice, and teaching of the relation between medical and psychiatric disorders.[1,2] In C-L psychiatry, psychiatrists serve as consultants to medical / surgical non-psychiatric colleagues. C-L Psychiatrist consults physician or surgeon regarding patients in medical or surgical settings and provides follow-up psychiatric treatment as and when needed. In addition to making diagnosis

and treating such patients, this subspecialty imparts teaching and conduct research in the general hospital psychiatric unit.[3]

Evolution of the concept

Consultation-liaison Psychiatry, Psychosomatic medicine, Psychiatry for the medically ill have been used interchangeably to describe the practice and philosophical premise of the area of psychiatry that interfaces with general medical conditions.[4,5,6] The informal origins of C-L psychiatry postdated psychosomatic medicine by more than a century. C-L psychiatry had long been considered the practical (clinical) arm of psychosomatic medicine so much so that researchers in the field of psychosomatic medicine were "jealous" of the popularity of C-L psychiatry.[4,6] The concept evolution of C-L Psychiatry will not be better understood without understanding the evolution of concept of psychosomatic medicine. The term psychosomatic is derived from the Greek words *psyche* (soul) and *soma* (body) which refers to how the mind affects the body. This linkage has been recorded by ancient philosophers and physicians many centuries ago. Johann Christian Heinroth, a German physician, in 1818 first used the term psychosomatic to describe insomnia because of influence of unconscious[5,7] and proposed that the psyche (or soul) and the body were simply two sides of a coin with the body being located externally and the psyche internally. Heinroth further posited a tripartite theory of the mind in an attempt to explain the concept of inner conflict, hint of a dynamic approach, and is believed to have influenced Freud in his own endeavors.

Seventieth century: Spinoza's hypothesized that both mind and body are identical and therefore inseparable, events in one being mirrored by events in the other. He referred to this concept of the inseparability of psychology and physiology as 'psychophysiological parallelism', a concept that differs little from holistic notions held by many contemporary thinkers.[4, 7] Harvey when described about blood circulation had mentioned that every affection of the mind that is attended with either pain or pleasure, hope or fear, is the cause of an agitation whose influence extends to the heart wherein, all these affections of the mind, like grief, love, envy, anxiety engender all manner of disease and negatively affect the body.[4] And today, we clearly know that depression increases the risk of cardiovascular events and vice versa.

Eighthienth Century: In 1788, the English physician William Falconer of Bath General Hospital published 'The influence of the passions upon disorders of the body', which emphasized the role of emotional states of mind in the cause or presentation of physical diseases.[4,6] Reil ushered in the notion of medical psychotherapy, encouraging practicing physicians to use this skill for its curative properties in both physical and mental diseases, pursued that psychiatry should be part of medicine and that scientific knowledge of the brain and the psyche should be the province of every physician.[5] Thus did medical and psychiatric reformers, bridging three centuries with their pedagogical application of knowledge of 'mind, brain and body phenomena' to medical practice, unknowingly foreshadow the liaison function of modern C-L psychiatry?

Ninteenth century: Benjamin Rush, father of American psychiatry, as Professor of Medicine (then) at Philadelphia College and the Pennsylvania Hospital, taught that mental illness could cause somatic illness by altering cerebral vessel pathology, defined psychiatry as a more formal medical discipline and thus absorbing the concept of psychosomatic medicine into the broader field of psychiatry.[8, 9] Subsequently Felix Deutsch in 1922 coined the term 'psychosomatic medicine' and proposed it to be a legitimate field

of medicine with strong organic basis. The end of the 19th century found convergence of the contributions of clinicians, teachers, and researchers that would become the foundation of American Psychosomatic Medicine. In Russia, Pavlov was demonstrating in animal experiments how the nervous system influenced the processes of digestion, work that won him the Nobel Prize in 1904.[4,9]

Twentieth century[10-16]***:*** Although Freud himself had never used the term 'psychosomatic' in his writings, he earnestly encouraged his disciples to use psychoanalytic concepts to clarify how physiological and endocrinological (biological) events were related to mental phenomenon. Adolf Meyer believed that his own comprehensive life history and life events were as clinically beneficial as personal psychoanalysis. And he viewed the psychiatric patient as a somatic and psychological unity that became ill because of internal pathology (biological) and maladaptations to the environment (social or cultural) and could only be understood through a study of its integration at the symbolic level. Therefore, the psychobiological orientation overcame the mind-brain parallelism during this time. Also, this has left a lasting imprint on the biopsychosocial basis of psychosomatic medicine and C-L psychiatry. This concept of Adolf Meyer contrasted with the psychoanalytic-psychogenetic approach of Franz Alexander that linked specific intra-psychic conflict to selected organic diseases such as peptic ulcer, bronchial asthma, ulcerative colitis and essential hypertension. This was how the concepts of 'dualism' (mind-body parallelism) vs. 'holism' (mind-body-environment) evolved and were debated. This followed various psychosomatic schools like psychoanalytic, psychophysiological, psychobiological and biopsychosocial were emerged. During World War II, Many of the principles of short-term psychiatric/psychoanalytic interventions were found applicable to patients in the emergency wards, medical/surgical units of general hospitals.[17] Leaders such as Lawrence Kolb, M. Ralph Kaufman, and others saw the value of the general hospital psychiatry for treating soldiers with combined medical and psychiatric illness during the war, and were avid advocates of this concept of C-L Psychiatry on their return to public life. Nonetheless, postwar respect for psychiatry and its relevance to general medicine had benefited immeasurably and may have brought some advantage to the cultivation of C-L psychiatry.[17] The improved profile of postwar psychiatry was further enhanced by the establishment of the National Institute of Mental Health (NIMH) by President Harry S. Truman in 1948 to conduct research, support training, and education in this area. In the foregoing developments, a coalescence of psychosomatic medicine and C-L psychiatry, with perhaps increased ambiguity about their distinctions were observed. Although the two appeared to travel together in the immediate postwar years, their paths would soon diverge. A new definition of multifactorial illness determined by multiple contributing factors: social, cultural, predisposition, genetic, immunologic, viral, hormonal, neurological and others paved the way. However, although C-L psychiatry, for many, became the clinical arm of psychosomatic medicine, much of psychosomatic research did not find ready applicability to clinical work. C-L psychiatry itself showed a poverty of its own research until the late 1970s.[18-20] Nonetheless, interest in this clinical domain continued to grow. To summarize, in principle, majorly, three schools of thoughts were dominant:

(a) Psychoanalytical or psychodynamic
(b) Psychophysiological
(c) Psychobiological

Off late, these schools of thoughts were followed by 'biopsychosocial approach' which

is the most accepted one, as of now.

Formal beginning of C-L Psychiatry

Medical historians such as Lipowski depicted three approaches for psychosomatic medicine:

(a) Research approach — looking at biological, psychological, and cultural variables
(b) A "holistic" view of the patient
(c) A sub-specialized psychiatry i.e. consultation-liaison. He along with his colleagues applied the class method (considered the first use of group psychotherapy) of medical psychotherapy to the treatment of groups of patients with tuberculosis, diabetes, and other chronic diseases, extended his group techniques to the common neuroses.[21,22] The proposed that psychiatrist would eventually serve as the liaison agent in the integration of various aspects of patient care and went on to say further that psychiatrist was most likely to be the integrator that unifies, clarifies and resolves all available medical knowledge concerning that human being who is the patient, into one great force of healing power. However, the formal designation of a consultation service is credited to George Henry, who described a program of psychiatric consultation and pedagogy in 1929, which did not diverge greatly from the generalized programs of today. He said: every general hospital should have a psychiatrist who would make regular visits to the wards, direct a psychiatric outpatient clinic, continue the instruction and organize the psychiatric work of interns and attend interdepartmental meets so that there would be a mutual exchange of medical knowledge, experience and a thorough discussion of the more complicated and challenging cases.[22] From 1975 onwards, the rapid growth of C-L psychiatry occurred because of more economic support from NIMH, research, literature and training, got approved as a subspecialty field of psychiatry by the American Board of Medical Specialties in the spring of 2003.

Consultation vs. liaison psychiatry

In Liaison psychiatry, the psychiatrist casts an earlier and wider net, proactively seeking out psychiatric and medical comorbidity in a clinic or ward and does not wait to see if the patient is identified and referred.[9] It deals with the denominator of the prevalence of psychiatric morbidity in medical setting. Whereas, consultation psychiatry is involved, only with the numerator by the nature of referral process (see Table 1).

Is C-L psychiatry cost effective?

Maintaining the financial viability of C-L services is essential in sustaining the cost effective operations. Nearly 30–40% of general hospital inpatients have diagnosable psychiatric disorders.[2,9,23] Detection screening of hospitalized medical-surgical inpatients can result in less depression and cognitive impairment at the time of discharge, decreased length of stay, fewer rehabilitation days and decreased rehospitalisation rates.[9,23] Medical-psychiatric co-morbidity (like depression, anxiety and cognitive dysfunction) predict increased cost and health care use and longer hospital stay even after accounting for demographics, degree of physical impairments, type of hospital unit, medical diagnosis and hospital diagnosis, circumstances of hospitalization.[2] Therefore, the C-L

Table-1: Consultation vs liaision psychiatry

Consultation	Liaison
• Psychiatric unit of general hospital	• Referral or call
• Only referred patients (numerator of psychiatric morbidity)	• Disturbed, agitated patients
• Fire fighter	• Education is rare
• Member of non-psychiatric team	• Attends regular rounds
• Can suggest on all patients as and when necessary (denominator of morbidity)	• Mostly attends stable cases
• Fire inspector	• Education integral

Psychiatrist must rate the complexity of the case, number of diagnosis, amount of time spent and report to the hospital administration to define and document sources of cost savings produced by the C-L service. This should bring C-L Psychiatry into limelight in the general hospital psychiatry unit.

Models of C-L psychiatry[24-27]

There are many models proposed by various people to their need and convenience. Below are some models in brief. [* For a more detailed discussion, refer to another review article in same issue titled 'Models of Consultation-liaison psychiatry']

Consultation Model: Consultation without any formal teaching

Liaison Model: Consult + formal, structured teaching by a psychiatrist-teacher for 1.5 months

Bridge Model: A psychiatrist teacher is assigned to a primary care teaching site, structured for 4 months

Hybrid Model: Psychiatrist + Behavioral scientist as part of multidisciplinary team for 4 months

Autonomous Psychiatric Model: Psychiatrist / behavioral scientist (trainer) not affiliated with department, hired by primary care services

Postgraduate Specialty-Training Model: Physician trained in a mental health setting for 1-2 yrs

Basic liaison Model: Psychiatrist teacher in medical/surgical unit

Critical Care Model: Assignment of mental health professional to critical care unit (CCU); patient care & staff consultation

Biological Model: Emphasizes neuroscience, psychopharmacology and psychological management. Member of a diagnosis centered treatment unit (e.g. pain clinic)

Milieu Model: Group aspects of patient care, staff reactions / interactions, ward environment, interpersonal interaction

Integral Model: Agency based, not patient based, includes psychological care as an integral factor functioning at clinical and administrative need, administrative organization delivers psychosocial care, integrated C-L services, social work, pastoral care, home care, supportive care and patient representatives.

PGI Model (followed in the Department of Psychiatry, Post Graduate Institute of Medical Education and Research, Chandigarh):

We follow a three tier system of junior resident, senior resident, and faculty. The system provides consultation liaison services, training and supervision, teaching and conduct research. The salient points are discussed below:

a) Services

- Services are provided by a team of three junior residents, one senior resident and a consultant
- Services are provided round the clock for 365 days of the year
- Easily and readily accessible (the C-L Psychiatry team reaches the medical ward within 30 minutes of receiving a call, prioritize the issues, take a relevant problem oriented and patient focused history and examination and then advise treatment)
- Detailed workup of all cases within 24 hours, supervised by senior resident and consultant to formulate a plan of management after establishing the diagnosis
- Ensuring the effective implementation of plan of management by supervisor
- Putting consultation note in the medical record case sheet
- Communicating the issues, diagnosis, relevant do's and don'ts to the primary treating team
- Discussing the reason for referral, status of the medical/surgical condition, any added information etc with the medical colleague. And then tailor made or modify the plan of management accordingly, if needed
- Follow up including discharge note/post discharge instructions, continuation of non pharmacological management sessions, and liaison with the consultee
- Record keeping (active /inactive / register): after discharge patient is attached to regular psychiatry outpatient department, allotted a psychiatry number and enters the main stream of comprehensive psychiatry care
- Social worker intervenes in appropriate cases for the needful after the case being briefed by the C-L Psychiatry team
- Psychometric tests done by the consultant clinical psychologist, as needed
- Common problems encountered: Delirium, depression, acute stress reaction, adjustment disorder, psycho-oncology and psycho dermatology conditions, transplant related issues, breaking the bad news and host of other conditions
- Services cover emergency and ward of all departments
- A new 24 hour help line service run by the C-L Psychiatry team for the students and staff of PGI (team is supported by administrative staff and social worker, in addition)

b) Teaching

- Regular (once in a month) psycho-somatic rounds with the department of medicine, neurology, surgery and pediatrics: a case with psychiatric and medical angle is presented by both psychiatry and medical resident as relevant highlighting the diagnostic/ management/psychosocial/legal issues in front of a large audience of medical and psychiatry residents plus consultant-in-charge from either discipline. The forum runs for one hour. Case examination, analysis, approach, diagnostic exercise, brief focused literature review and interesting brainstorming discussion are the pronounced feature.
- The consultant on duty (rotation basis) teaches the theoretical and practical aspects of the case, bed side or round room, daily.
- The resident is encouraged to read

thoroughly about medical condition and is disused by the senior resident and / or consultant

- A referral register is maintained, detailed work up files are monitored, in the C-L Psychiatry record meeting held once a month, for supervising the quality of services provided, data recording, and learning of the trainee. Any difficulty in the case raised by the trainee are handled and taught accordingly

c) Research

Enormous amount of research is done by the department, especially in the area of delirium, depression in medically ill. The research has focused on the prevalence of psychiatric illness in medical settings, clinical and laboratory parameter profile of such patients and their relationship with the psychiatric condition, treatment aspects of such conditions like differential response of antipsychotics in delirium etc.[28—31]

Scope of C-L psychiatry[3]

1. Assess and manage acute and emergency presentations of psychiatric morbidity in the general medical setting.
2. Understand the impact of medical illness and the system in which it is treated and how this affects the presentation, experience, and impact of psychiatric and psychosocial morbidity.
3. Conduct a biopsychosociocultural assessment, create a formulation, and implement appropriate treatment in the context of the general hospital including effective communication with the rest of the treatment team.
4. Assess reactions to illness, and differentiate the presentation of depression and anxiety in the medical setting.
5. Understand the combined trajectories of illness and the developmental issues of the person with mental health problems and mental illness.
6. Ability to assess and treat somatization and somatoform disorders.
7. Ability to assess and manage common neuropsychiatric disorders, with a particular emphasis on delirium.
8. Understand the particular needs of special populations with psychiatric and psychosocial morbidity in the medical settings, including the young, the old, the indigenous, and those with intellectual disabilities.

C-L psychiatry in education and training[1,3,25,27,28]

The primary goal of C-L Psychiatry rotation is to ensure that residents develop a basic competence in working with patients who have psychiatric presentations in inpatients and ambulatory medical or surgical settings plus administrative and academic responsibilities. The duration and hours of rotation training varies from university to university as the practice of psychiatry is changing faster than training requirements and the norms. C-L psychiatrist trainee must learn to play many roles: skillful and brief interviewer, good psychiatrist and psychotherapist, teacher, and knowledgeable physician who understand the medical aspects of the case. Basically, teaching trainees about the practice of C-L Psychiatry involves didactics, bedside rounds, reviewing the literature, and the demonstration of specific skills (e.g critical thinking, and self awareness). Effective teaching uses problem oriented approaches, integrates knowledge into real life situations, and makes trainees responsible for their decisions. Discussions of differential diagnosis, work-ups,

formulations that involve biological, psychological, sociocultural and existential perspectives; and treatment of a host of conditions create a solid foundation. Teaching C-L Psychiatry is most effective with a layered approach, tailored to specific teaching forums and learning and teaching style of trainees and trainers.[27]

Legal and ethical issues in C-L psychiatry

Legal issues in C-L Psychiatry are as applicable as in conventional Psychiatric practice. This is influenced by four major factors: (1) the psychiatrist's professional, ethical, and legal duties to provide competent care to patients; (2) the patients' rights of self-determination to receive or refuse treatment; and (3) the ethical codes and practice guidelines of professional organizations

Some issues are as below[1,3]

a) **Medical malpractice:** It is a wrong resulting from a physician's negligence. Negligence means doing something that a physician should not have done or failing to do something that should have been done as defined by current medical practice. To prove malpractice, the patient or family must establish that (1) a doctor patient relationship existed and the doctor has treated the patient, (2) a deviation from the standard of care, (3) there is damage to the patient, and (4) this deviation has directly caused the damage. These elements of a malpractice are referred to as the 4 Ds ***(duty, deviation, damage, and direct causation).***

b) **Negligent prescription practices:** these include exceeding recommended dosages and then failing to adjust the medication level to therapeutic levels, unreasonable mixing of drugs, prescribing medication that is not indicated, prescribing too many drugs at one time, and failing to disclose medica-tion effects. Multiple psychotropic medications must be prescribed with special care because of possible harmful interactions and adverse effects, more particularly in elderly.

c) **Informed consent:** The areas of information that are generally provided: diagnosis and description of the condition or problem, treatment nature and purpose of proposed treatment, conse-quences, risks and benefits of the proposed treatment, alternatives to the proposed treatment including risks and benefits, prognosis and projected outcome with and without treatment. Any individual has right to refuse treatment, or to change the doctor after being explained details as above.

d) **Confidentiality:** the information obtained has to be kept confidential like sensitive information, personalized information etc. The exceptions are: hospital personnel, public safety, for the purposes of health insurance portability and accountability and for protection of third party, if need arises.

e) **Treatment refusal and involuntary treatment:** is guided by "best interest principle". An individual who is not in "mental capacity" to give consent for treatment or hospitalization can be admitted involuntarily taking consent from family member(s) or legal guardian, if any.

f) **Basic ethical principles** of autonomy, beneficence, non-maleficence and justice are applicable to C-L Psychiatry, too.

Conclusion

C-L Psychiatry is a valid and approved subspecialty of psychiatry that requires multidisciplinary team approach. Intervention by a C-L Psychiatrist increases overall outcome physical illness, psychological well being and likely to take life events more positively. The scope for research in this subspecialty is immense. A structured teaching and training in this

subspecialty is essential for psychiatry residents. Administration of hospitals needs to be taken to confidence for further growth of this subspecialty in every general hospital psychiatric units.

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Review article

Models of Consultation-Liaison Psychiatry

Sujata Sethi

Abstract

From the time of Hippocrates, there have been efforts to integrate mind and body. The first formal efforts at integration of psychiatric and medical care began in mid-20th century with the psychosomatics movement. General hospital psychiatric units (GHPU) provided easy access to psychiatric services. But this service was limited to the patients referred to the psychiatrists. There was no academic or teaching input for the referring physician and his team. Consultation-liaison psychiatry (C-L psychiatry) moved from this traditional consultation model to liaison model. However over the last two decades many new models of integrated care have appeared depending upon the area of focus. This paper discusses various models of C-L psychiatry with future challenges.

Key words: consultation, liaison, integrated care, models.

Introduction

From the time of Hippocrates, there have been efforts to integrate mind and body. The first formal efforts at integration of psychiatric and medical care began in mid-20th century with the psychosomatics movement. But this could only fill the theoretical and academic gap between psychiatric and medical illnesses. The clinical integration appeared only with the emergence of general hospital psychiatric units (GHPU). GHPUs provided easy access to psychiatric services for the management of patients with psychosomatic and organic brain disorders. But this service was limited to the patients referred to the psychiatrists. There was no academic or teaching input for the referring physician and his team.

However over the last two decades with deeper and changed understanding of the biology of mental illness, more concern with the economics of the practice of medicine and psychiatry, and options for training physicians have given birth to new models of integrated care. This demand also comes from the consumers and their intuitive desire that their minds, brains and bodies be treated in concert. They want "one-stop shopping" at the primary care level.[1] This demand as well as academic needs have created various models of integrated care depending upon the area of focus (Table 1).

For practical purposes these model can be of three types:

1. ***Models based on focus of consultation*** include patient oriented approach, situation oriented approach, crisis oriented approach, consultee oriented approach and expanded psychiatric consultation model.

Table 1: Models of Consultation-Liaison Psychiatry

I.	**Focus of Consultation**
	a. Patient-oriented model
	b. Situation-oriented model
	c. Crisis-oriented model
	d. Consultee-oriented model
	e. Expanded Psychiatric Consultation model
II.	**Focus of Function**
	a. Consultation model
	b. Liaison model
	c. Bridge model
	d. Hybrid model
	e. Autonomous Psychiatric model
III.	**Focus of Work**
	a. Basic Liaison model
	b. Critical Care model
	c. Biological model
	d. Milieu model
	e. Integral model

In *Patient oriented model* patient is the primary focus. This approach not only includes diagnostic interview and assessment but also gives due weightage to psychodiagnostic evaluation of personality and patient's reaction to illness.[3]

In *Situation – oriented approach*, the focus is on interpersonal interactions of members of the treating team involved in the care of patient for whom consultation had been sought earlier.[4] *Crisis-oriented model* as the name suggests, carries out a rapid assessment of patient's problem and his coping styles and employs an immediate therapeutic intervention for the problem.[5]

In *Consultee – oriented model* motives of the consultee, the difficulties faced by him and his expectations from the consultation are the main concerns.[6]

Expanded psychiatric consultation model includes an operational group that involves patient, his family, clinical staff, and other patients but main focus is on patient under consultation.[7]

2. ***Depending upon the focus of function,*** the models of consultation liaison include consultation model, liaison model, bridge model, hybrid model and autonomous psychiatric model.[8]

The traditional *Consultation model* provides consultation for the cases referred from the medical/surgical departments. It functions as a "fire brigade" for emergency psychiatry care. However the consultation rate is very low and services are limited to clinical cooperation only.

The *Liaison model* is a more integrated form of cooperation between psychiatric and medical services. A psychiatrist consultant is assigned to a specific medical/surgical unit who provides formal, structured teaching. This approach not only provides more effective long-term treatment of patients with psychiatric comorbidity but also provides support to medical teams working in distressing surroundings e.g. ICUs.

In *Bridge model* a psychiatrist teacher connected to a formal department of psychiatry is assigned to primary care physicians/teaching site who imparts structured teaching to the team.

Hybrid model consists of a multidisciplinary team including psychiatrist, behavioral scientist (e.g. psychologist, social worker) and primary care faculty itself. Psychosocial teaching is provided by the psychiatrist.

In *Autonomous psychiatric model*, the psychiatrist/ behavioral scientist (trainer) has no affiliation to a department of psychiatry and is hired by primary care services.

3. ***Depending upon the focus of work*** the various models include basic liaison model, critical care model, biological model, milieu model, and integral model.[9]

Basic liaison model assigns a psychiatrist teacher to medical/surgical unit. This model works on the principles of liaison model.

In *Critical care model* a mental health professional is assigned to critical care units such as ICU, ICCU who is actively involved in the

patient care as well as for the redressal of issues of staff.

Biological model emphasizes on neuroscience, psychopharmacology and psychological management. The C-L psychiatrist is an integral member of the diagnosis centered treatment unit (e.g. pain clinic).

The *Milieu model* is based on interpersonal theory and deals with group aspects of patient care**,** staff reactions / interactions, and understanding of ward environment.

The *Integral model* is agency based, not patient based. It includes providing psychological care as an integral factor of clinical and administrative need. The administrative organization delivers psychosocial care. Various services provided under this approach include integrated C-L services, social work, pastoral care, home care, supportive care and patient representatives.

A closer look at above mentioned models shows that these models can be described along several dimensions.[10] A generalized theory of linkages between the two systems is not limited to specific care levels or settings but rather reflects the degree of emphasis on three sets of elements:

Contractual elements consisting of formal or informal agreements between the two settings, such as patient referral, data sharing, access to patient records, and follow-up procedures, among others.

Functional elements include aspects of the relationship actually encountered by the patient through any possible combination of services, ranging from diagnostic evaluation to short-and long-term treatment models.

Educational elements that serve to establish and reinforce the primary care provider's knowledge and skills in behavioral health or the behavioral health specialist's understanding of general health issues.

Based on this framework Pincus (1987) describes six different models[10]

1. Model I is focused principally on contractual elements (i.e. an agreement between individual mental health and general health providers or mental health and general health organizations regarding referral, information exchange, and other matters);
2. Model 2 adds a person who triages patients and facilitates the contractual arrangements;
3. Model 3 incorporates an actual behavioral health unit that treats most patients who are referred (as in most large health institutes);
4. Model 4 places strong emphasis on consulting with the primary care providers, enabling them to treat more of the mental health problems of their patients (as in academically affiliated clinical settings);
5. Model 5 focuses exclusively on education, with no emphasis on service delivery;
6. Model 6 is an integrated health care team wherein the primary care provider and mental health specialist serve on the same team, treating the patient together.

Future models should guarantee sufficient horizontal integration between care providers in the inpatient or outpatient setting, sufficient vertical integration between inpatient and outpatient care, including forms of transitional care (such as day hospitals and transfer units). Future models will include complexity assessment to support the decision to assign patient-oriented services and the related levels of care.[1]

Conclusion

From the very beginning, one of the aims of C-L psychiatry is to achieve a better holistic care of patients. It has moved from traditional consultation approach to highly integrated approach wherein C-L psychiatry not only provides input for patient care but also works towards enhancing the biopsychosocial attitudes

and knowledge of physicians.

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Review article

Principles, guidelines and future of consultation-liaison psychiatry

Deepak Kumar

Abstract

Consultation Liaison Psychiatry, grounded in the biopsychosocial paradigm, has emerged as a subspeciality of discipline of psychiatry over the past few decades. It incorporates the clinical services, teaching and research at the interface of psychiatry and medicine. It must be emphasised that there are several models of C-L psychiatry described in the literature, both for Consultation and for Liaison. The field of C-L Psychiatry, even though originating in the United States, is now being studied and reported from across the globe, including India. The article will attempt to give a broad overview of the general principles, and guidelines of Consultation Liaison psychiatry. The future seems promising and lies in the development of skilled multidisciplinary teams emphasizing close collaborations between psychiatric and non psychiatric physicians and surgeons. Continued research and sensitisation of the policy makers would be imperative for its growth and sustenance in the years to come.

Keywords: *Consultation, Liaison, Consultation Liaison Psychiatry, Psychosomatic medicine*

"I find by experience that the mind and body are more than married for they are most intimately united and when one suffers the other sympathizes."
— Lord Chesterfield

Introduction

Consultation-Liaison is a specialized service within psychiatry that deals with the overlap of physical health and mental health care issues. The Consultation-Liaison Service as a sub-specialty of psychiatry often utilizes a multi-disciplinary team approach (psychiatry, psychology, and nursing) for assessment and treatment.

In Consultation-Liaison (C-L) Psychiatry, the biopsychosocial model of health is embraced and promoted worldwide, including in India.[1] It emphasizes the unity of mind and body & the interaction between them. It lays emphasis on examining and treating the whole patient- 'a holistic approach to medicine.'

The C-L psychiatry is often described or reported in literature and scientific circles by related terms/fields: Psychosomatic medicine, psychiatry in the medically ill, medical/surgical psychiatry, psychosomatic psychiatry, behavioural medicine, health psychology and so

on. There is also a debate over the appropriate name for the subspecialty.[2]

Scope of consultation-liaison psychiatry

George Henry's paper[3] in 1929 had possibly marked the beginning of C-L Psychiatry. It was formally recognized as a subspecialty by the Academy of Psychosomatic Medicine in 1955. The scope of C-L Psychiatry[4] has been well elucidated by the Royal Australia & New Zealand College of Psychiatrists. It is as follows:

- Understand the impact of medical illness and the system in which it is treated and how this affects the presentation, experience, and impact of psychiatric and psychosocial morbidity.
- Conduct a biopsychosociocultural assessment, create a formulation, and implement appropriate treatment in the context of the general hospital including effective communication with the rest of the treatment team.
- Assess reactions to illness, and differentiate the presentation of depression and anxiety in the medical setting.
- Understand the combined trajectories of illness and developmental issues of the person with mental health problems and mental illness.
- Ability to assess and treat somatization/ somatoform disorders.
- Ability to assess and manage common neuropsychiatric disorders, with a particular emphasis on delirium.
- Understand the particular needs of special populations with psychiatric and psychosocial morbidity in the medical settings, including the young, the old, the indigenous, and those with intellectual disabilities.
- Assess and manage acute and emergency presentations of psychiatric morbidity in the general medial setting.

Common clinical problems seen in consultation-liaison psychiatry

C-L Psychiatry is the subspecialty of Psychiatry that incorporates the clinical services, teaching and research at the borderland of psychiatry and medicine.[5] It deals with a range of clinical issues, the common ones are enlisted below:

- Suicide attempt/ threat/ deliberate self-harm
- Agitation/ aggression/ violent behavior
- Depression/ anxiety
- Sleep disorder
- Substance abuse or dependence
- Hallucinations and delusions
- Confusion / disorientation
- Cognitive impairment
- Uncooperative patient/ non compliance or refusal to consent to procedure
- No organic basis for the symptom / functional somatic symptoms

C-L psychiatry in special situation/ clinical areas

Following areas in Medicine and Surgical disciplines are of special relevance to C-L psychiatry due to the nature of the disorders as well as the challenges they pose in their management:

- Intensive care units (ICU's)
- Hemodialysis units
- Organ transplantation units
- Oncology settings (end of life care and palliative care units)

Principles of C-L psychiatry services

It must be emphasised that there are several models of C-L psychiatry described in the literature, both for Consultation and for Liaison.[6] Some of these include Patient oriented model, crises oriented model, consultee oriented model,

situation oriented model, expanded psychiatric consultation model, basic liaison model, critical care model, biological model, milieu model, integral model. However these models are detailed in the relevant section.

C-L psychiatrist is viewed as:

- An expert in the mental status examination,
- Knowledgeable about medical conditions and treatments,
- Able to communicate with other physicians metaphors of Medicine,
- Skilled at forming a comprehensive biopsychosocial differential diagnosis,
- Comfortable in working with medical-surgical colleagues,
- Skilled in both psychopharmacology and psychotherapy,
- Cost-effective, and able to work in a variety of different medical and surgical settings.

General principles of C-L psychiatry[7]

- To have assigned psychiatrist to each specialty - department as well as medical OPD and emergency (in a teaching hospital)
- Consultant to be member of professional team in a department to which he is assigned and participates in daily / weekly rounds
- Consultant should possess medical knowledge, personal qualities which enables him to be acceptable member of team
- He has to be readily available and prove his usefulness to the medical team
- The success depends on the quality of the C-L services provided by the psychiatrist

Guidelines in C-L psychiatry

Why are guidelines necessary in the first place? The primary reason is to ensure that patients with psychiatric illness in medical-surgical settings receive the highest possible quality of care. Thus, the guidelines specify the special training, knowledge, and skills required to provide psychiatric consultation for medical patients and their physicians and delineate the appropriate areas of clinical expertise in this process for mental health professionals.[8]

The Academy of Psychosomatic Medicine, the society for psychiatrists working at the interface between medicine and psychiatry, has developed standards for the training of psychiatric residents in consultation-liaison psychiatry as well as established standards and an accreditation process for fellowship training in the subspecialty.[9-11] This organization formally examines and certifies fellowship programs in C-L psychiatry. In "The Academy of Psychosomatic Medicine Practice Guidelines: Psychiatric Consultation in the General Medical Setting," Harold Bronheim, and associates have comprehensively documented the integrated basis for psychiatric consultation and liaison in medical care.[9] Through these guidelines, the Academy documents the need for expert consultation in the general medical setting; outlines the knowledge base and clinical skills necessary to render quality care; and sets the basic standards for the diagnostic evaluation, psychotherapeutic, and pharmacologic treatment of this patient population.

Special emphasis is placed on fundamental components of psychiatric assessment (history taking; physical, neurological and mental states examination; laboratory and neuroimaging tests) as well as the process of consultation systems analysis. Treatment issues receive special attention as well and emphasize treatment intervention based on a biopsychosocial model. Hence, the intervention recommended should be based on a knowledgeable assessment of the

biological/medical aspects of the patient, which may require additional medical testing, change, or adjustment of medications used to treat the patient's medical disorder, as well as specialized psychopharmacology for the medical patient.

Special issues in psychotherapy for the medically ill are noted, taking into consideration the need for pragmatic, often shorter, forms of dynamic and cognitively based interventions to address the impact of acute and chronic illness on the patient's emotional homeostasis. The importance of family and social assessment and intervention in the treatment plan is also outlined. These guidelines also discuss special issues such as supervision standards, ethical standards, research issues, and special considerations for medically ill children and adolescents.

These guidelines are not meant as a mandatory set of imposed standards that the psychiatrist must follow.[12] Guidelines are meant to assist the physician in treating the patient; the uniqueness and necessities of each individual clinical situation is paramount. Ideally, guidelines should be based on well-developed scientific evidence such as controlled clinical studies. Because medicine is a continuously evolving field, guidelines by their nature are a hybrid construction from evidence based on scientific investigation and evidence based on consensus opinions from clinicians. The Institute of Medicine has outlined the process of developing guidelines that incorporates these principles. The present guidelines represent such a hybrid, which is based on an extensive examination of the available scientific evidence as well as the consensus opinion not only of the task force but also of the members of the Executive Council of the Academy.

As the primary goals of medicine are the prevention of disease and the promotion of the health and well-being of the patient, we hope these guidelines will help achieve these ends by ensuring excellence in the clinical care of patients with combined medical and psychiatric illness.

Future of C-L psychiatry[13-16]

C-L Psychiatry for its growth and sustenance in the future would require to:

- Integrate with other conceptual models existing
- Maintain clinical leadership and the C-L model
- Carry out advocacy in the primary care
- Develop liaison with the educators
- Develop liaison with the policy makers, consumers and support groups
- Carry out RCTs to document the cost effectiveness of Consultation vs C-L model
- Ensure continued research (multi-centric) and add to the evidence based practice

The emphasis has shifted from liaison to reimbursable consultation activities, especially in USA. Hospital stays are shorter with emphasis on outpatient and prepaid settings. Less expensive health care professionals are often asked to see patients previously evaluated by psychiatrists. Thus need for focused cost-effective liaison services in this climate is being emphasised. Funding strategies for consultation-liaison programs, models of staffing consultation-liaison services, continuity of care from inpatient to outpatient services, integration of consultation-liaison psychiatrists in prepaid health care settings, primary-care educational programs, and psychosocial intervention programs for high-risk primary-care patients are other issues of relevance in this background. In a recent article, Malt[17] has made following valid observations in his provocative article 'the future of C-L Psychiatry: prosper or perish':

- Consultation-liaison services are often provided by psychiatric residents on duty.

The lack of special knowledge of the interface between biomedicine, psychology and psychiatry decreases quality of service and may reduce future acceptance of C-L within the general hospital.

- Many consultants providing C-L services deal with clinical problems according to their theoretical training and (limited) knowledge. In the European C-L psychiatry and psychosomatics workgroup study, including 56 C-L services from 11 European countries, further analyses showed that treatment prescribed was predicted by the theoretical orientation of the C-L provider and not by patient's diagnosis or need. This incongruence is seen in non-European countries as well. This has been criticised by few authors.
- In some countries, psychiatric labels (e.g. 'adjustment disorder') may be used for reimbursement purposes (as done in US), when the patient's response is strong, but normal. Using psychiatric diagnoses for economical or political reasons threatens the credibility and ethics of C-L within the general hospital.
- The hospital owners' or health insurance companies' emphasis on cheap short-term services may threaten the professional ethics and standard of C-L psychiatry and thus its continued existence.
- In the future, inpatients will be limited to those needing 24 hour medical supervision. Most patients will be regular outpatients. This development calls for a psychosomatic approach that goes beyond the current narrow psychiatric perspective. A closer collaboration with primary care is needed. But most CL services are low-staffed and poorly prepared for this shift. This might also weaken the future acceptance of C-L psychiatry.

The area of C-L Psychiatry, even though originating in the United States, is now being studied and reported from across the globe, including European nations (Spain, Norway and Germany), Japan, Australia, Oxford in UK[18], and India.[19]

Conclusion

Although recognised as a subspeciality of psychiatry, the practice of C-L psychiatry is still limited and particularly so in India. It continues with the agenda of developing efficient models, grounded in well laid down principles, of integrating the discipline of psychiatry in the medical settings, both ambulatory and in hospital settings. The future lies in the development of skilled multidisciplinary teams emphasizing close collaborations between psychiatric and non psychiatric physicians and surgeons.[20] Continued research and sensitisation of the policy makers would be imperative for its growth and sustenance[21] in the years to come and it is desirable that the psychiatrists (including the residents) are aware of these developments and perspectives.

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Review article

Consultation-liaison Psychiatrist: Roles and Approach

Naresh Nebhinani, **Rajiv Gupta**

Abstract

Over the years, consultation-liaison psychiatry (C-L psychiatry) has contributed significantly to the growth of the psychiatry. It has made psychiatry an integral part for the care of patients with medical/surgical illness. It has also led to changes in the medical education and comprehensive management of the physically ill. By touching the core of C-L psychiatry in this review, we will discuss the different roles and specific approach of a C-L psychiatrist.

Key words: *Consultation, liaison, C-L psychiatry, C-L psychiatrist, roles, approach*

Introduction

Recognition of a psychiatric illness in general wards by the physician and surgeons remain difficult for various reasons: patients may not provide any cue, the cues are not picked up by the treating team, patients lack privacy to discuss, treating team doesn't look beyond organic cause and at times, they may remain reluctant for psychiatric referral despite doubting for presence of a psychiatric disorder.[1] The reasons of their reluctance for psychiatric referral might be their unawareness about the need and importance of psychiatric intervention, misconceptions about psychiatric disorders as incurable and psychotropics as addictive, fear of patient's reaction on advice of such referral and their poor working relationship with psychiatrists.[2] This has led to the concept of consultation-liaison psychiatry (C-L psychiatry) to facilitate psychiatric care of medically ill.

C-L psychiatry is defined as the subspecialty of psychiatry that encompasses the necessary knowledge and skills to manage the psychological problems of patients with medical/surgical illness.[3] It incorporates clinical service, teaching, and research at the borderland of psychiatry and medicine.[4] C-L psychiatrist is defined as a psychiatrist working in the general hospital (as opposed to the mental hospital or community.[3]

Consultation-liaison psychiatry has been with us since Barrett (1922) first proposed the term "liaison" to describe what a psychiatrist consultant does in relationship to medicine and social problems.[5] In the eight decades that have followed, consultation-liaison psychiatry has established clear roles and approach for the C-L psychiatrist. With this subspecialty we can help physicians to develop the skills needed to efficiently and effectively communicate with their patients, to ask questions that will reveal a patient's true concerns, and to make effective and relevant psychiatric referrals.

The aims of psychiatric consultation in the medical/surgical setting are to ensure the safety and stability of the patient within the medical environment, to collect sufficient history and

medical data from appropriate sources to assess the patient and formulate the problem, to conduct a mental status examination and neurological and physical examinations as necessary, to establish a differential diagnosis, and to initiate a treatment plan.[6]

The roles and responsibilities of the consultation-liaison psychiatrist is an underpinning of commitment for comprehensive care of the medially ill patients. The duty of C-L psychiatrist can be unpredictable, challenging and at times difficult as they can be called to examine a patient with a chronic psychiatric disorder, a recent onset psychiatric disturbance, and sudden changes in mental status or at times when consultee could not understand the patient's complaints or presentation.[7] Such calls may be sent due to patient's distress or discomfort of primary treating team generated by patient's behavior. Thus the role of C-L psychiatrist has two dimensions, first is the interaction with patients and their families and second is the interaction with treating physician and his team.[7] In this review, we will elaborate the different roles and specific approach of C-L psychiatrist.

Assessment

Consultations are usually requested by physicians who are directly responsible for the care of the patient. In institutions with ongoing liaison activities with medical or surgical services, the psychiatrist as part of the team may accept a referral and evaluate any patient admitted to the service. Such consultations may have life-and-death implications for a patient as delay in the detection and diagnosis of these disorders may have dire consequences.[6]

When you get a phone call or written call for consultation (then ASK)[8]

1. Who is calling? (Physician name, affiliation, mobile/ extension number)
2. What's the patient information? (Name, age, gender, specific location, bed number and his/her availability with informants)
3. Reason of referral / formal consult question
4. Urgency (routine, urgent, emergent)
5. Is the patient aware that a psychiatric consultation has been ordered?

Triage of patients

To deal effectively with the range of psychiatric emergencies, a physician needs to be skilled in rapid assessment of the patient and a mental triage so that the evaluation moves in the right direction.[9] It is based on 'ABC model', which is agitation / alertness, beware of masquerading medical conditions, and consider a wide differential of psychiatric diagnoses.[10]

Reasons for Referral

C-L psychiatrist used to receive request (usually written) expressing concerns or asking specific questions about a particular patient. Though there are no established procedural definitions for which clinical situations are designated as emergencies; the emergency designation is based on the requesting physician's perceived need for prompt service or C-L psychiatrist's approach.[11] Commonly, the requests for psychiatric consultation fall into several general categories[10]

1. Psychiatric disorders manifesting as medical conditions
2. Psychiatric disorders related to adjustment to medical disorders
3. Psychiatric disorders manifesting as management problem
4. Substance related disorders
5. Other psychiatric disorder such as acute agitation, suicidal or homicidal ideation, death wish/ euthanasia, high risk for psychiatric illness e.g. transplantation, patient who requests to see a psychiatrist, psychiatric emergencies, medico-legal competency evaluation etc.

History taking and examination

C-L psychiatrist should carry following things while going for evaluation of any patient: performa/ assessment forms (departmental work-up sheet or personal interview guide, various rating scales etc), psychiatric admission forms (voluntary, involuntary), medication reference guide, and instruments (penlight, reflex hammer, and stethoscope).[8]

Medical-Psychiatric History: Contrary to the usual medical or psychiatric examination, the medically ill patient seldom requests a psychiatric consultation and may even assume an adversarial attitude toward the C-L consultant. To obtain a psychiatric history the consultant must be skilled at rapidly establishing the context of the psychiatric disorder and to formulate and organize DSM-IV multiaxial diagnoses in the medical/surgical setting. For proper history taking the following areas should be assessed thoroughly.[6]

Consultee-stated vs. consultant-assessed reasons for referral

The overt reason expressed for the need for consultation may be incomplete, or a request may be made for the assessment of one problem (e.g., depression) when another more serious problem (e.g., delirium) is unrecognized. Requests may be vague if made by someone who has not observed the patient's behavior of concern. Therefore, direct contact with the individual who initiated the request is beneficial for obtaining exact information about the patient's behavior, which may not appear in the record.

Extent the patient's psychiatric disturbance is caused by the medical/ surgical illness

The medical chart must be reviewed for pertinent medical factors that could contribute to the patient's current state. Patient's mental status and the behavior noted by the family members and medical staff should be explored in details to reach any of such association.

Extent the psychiatric disturbance is caused by medications or substance abuse

The patient's medication list and recent changes in medication should be critically evaluated as the psychiatric symptoms are frequently produced by medications prescribed for medical disorders. These symptoms can be produced at therapeutic levels, may emerge at times of withdrawal, or may arise as a result of drug-drug interactions.

The type, quantity, and frequency of current and life time prescription drug use as well as substance abuse should be assessed. Previous treatment records and psychiatric disturbances should also be inquired. Urine and serum toxicological screening may be requested when there is suspicion of, or the need to document, substance abuse.

Psychiatric symptoms and behavior

Psychiatric symptoms, associated cognitions and affect should be evaluated thoroughly along with patient's and his/her family's perspective of possible precipitating, exacerbating, or resolving factors. Review of prior response to physical illness or psychiatric treatment can facilitate proper diagnosis and treatment.

Thoughts of dying/ suicidal ideation

Many patients think about dying, especially when they are exhausting or critical and some of them express their wish to die to the medical staff which may lead to a request for a psychiatric consultation. Thoughts of dying related to life-threatening physical illness and suicidal ideation related to depression should be distinguished and patient's cognitive distortions must be addressed. The C-L psychiatrist must be familiar with the medical treatment and/or hospital course to ascertain whether the patient understands of his/her illness and its possible course, with or without treatment.[12]

In addition, the C-L consultant should evaluate cognitive disturbances and determine if the change in mental status is chronic and due primarily to the consequences of an underlying disorder (e.g., Alzheimer's disease, multi-infarct dementia) or acute and arising secondary to the effects of illness, medication, or a combination of factors. An integrated, multimodal assessment and management of patients in pain is also crucial.[13]

Physical and mental status examination

The psychiatric consultant should review the results of the physical examination and additionally conduct physical or neurological examinations on the basis of psychiatric interview and diagnosis. In addition to an examination to elicit signs and symptoms of psychiatric disorder, the purpose of the mental status examination for the medically ill is to elicit the patient's capacity to understand and cope with the illness and to make decisions about care.

The Consultation Note

A written report of physician-to-physician communication is prepared which is called 'consultation-liaison note' (C-L note). Although the comprehensive consultation requires attention to all domains, the consultation note is best if brief, focused and provides a framework for providing information back to the consultee.[14] The consultant should avoid using acronyms, psychiatric jargon, or other wording that is likely to be unfamiliar or confusing to other medical/ surgical specialists.

An identifying statement that succinctly summarizes the patient's presenting condition and the referring physician's reason for consultation should be present. The names and position of the consultant or residents involved with the assessment need to be included along with mentioning thanks for referral and the note must be signed. Documentation of the date and time of consultation is necessary along with the source of information.

The history of present illness should include the relevant data from the history that may have significant bearing on the diagnosis and/or formulation or on the rationale for management and treatment. The consultant's objective findings on mental status examination and physical/ neurological examinations should be carefully documented. The formulation, multiaxial diagnosis (DSM-IV-TR)[15] and recommendations should be written concisely with giving patients more choice and involvement of patient and consultee in the final management plan (Hamburg, 1987). Clear statements of follow-up and management (by whom and when) are desirable. The C-L consultant should make an effort to communicate verbally to the consultee and to identify the procedure for follow-up contacts or questions.[8]

This relatively brief note thus reflects a high degree of effort, expertise, and integrative ability. This documentary information is very important as it gives direct advice to the treating team.[14]

Testing and referral

The psychiatric consultant must be skilled for various surgical, medical, neurological, or other evaluations if the underlying medical condition that may be contributing to the psychiatric disturbance. The C-L consultant must be familiar with diagnostic testing regarding: the indications for anatomic brain imaging or neurophysiological screening by computed tomography (CT), magnetic resonance imaging (MRI), and electroencephalogram (EEG); indications for the administration of neuropsychological tests; use of instruments to aid in diagnostic interviews and screening or measuring severity of comorbid mental disorders such as Mini-mental state examination (MMSE), Hamilton Depression Rating Scale (HDRS); the controlled administration of amytal or other hypnotics to interview for conversion disorder

or a naloxone challenge test for suspected opioid dependence; and indication and relevance of various blood investigations such as for dementia workup

The C-L consultant should recommend that other professionals be brought into the case when additional expertise is required. The request for additional consultation(s) should in general be arranged by the original consultee. When the C-L psychiatrist recommends psychotropic medications, he/she should continue to follow the patient for the duration of the hospitalization, until psychotropics have been discontinued, or until the consultee no longer requires the consultant's services.

Interventions

Pharmacotherapy

Numerous physical conditions may cause, exacerbate, or first present themselves as psychiatric syndromes, and appropriate use of psychopharmacology necessitates a careful consideration of the underlying medical illness, drug interactions, and contraindications.

In addition, many medications used in the treatment of medical/surgical illness are associated with psychiatric syndromes (e.g. L-dopa, steroids). Therefore, the C-L consultant must be knowledgeable about the psychiatric effects of medications as well as the specific indications for psychopharmacological interventions. Pharmacotherapy of the medically ill often involves modification in dosage (e.g., to account for older patients with an increased volume of distribution, a decreased rate of metabolism and an increased physiologic reactivity). Furthermore, modifications may be necessary because of liver, kidney, or cardiac disease, or because of potential for multiple drug-drug interactions.[16,17]

The psychiatric consultant should recommend and prescribe medications whenever a major psychiatric syndrome is diagnosed and when the benefits of treatment outweigh its risks. In addition, the C-L psychiatrist must have additional pharmacological knowledge to recognize the drug-induced psychiatric syndromes (e.g. depression, psychosis, delirium) and to manage substance-induced psychiatric disorders. Because noncompliance and subtherapeutic use of psychotropics are common, the C-L psychiatrist must make additional efforts to ensure appropriate and timely compliance with pharmacological recommendations arising from inexperience on the part of the consultee or resistance on the part of the patient.

Psychotherapy

C-L consultant must have the ability to apply a variety of psychotherapeutic techniques to the medically ill. Medical psychotherapy encompasses a body of clinical techniques (e.g., crisis interventions, supportive therapy, cognitive–behavioral therapy, short-term therapy) that may be applied singly, in combination, or alternately in different stages of an illness.[6] The psychotherapeutic approach to the medically ill should be primarily selected in response to the patient's needs.

The C-L consultant should have extensive knowledge and clinical experience dealing with the psychological stresses inherent in medical illness (e.g. impending death, guilt about dependency). The C-L consultant should be experienced to deal with the emotional reactions of health care providers to their patients.

Follow-Up

The scope, frequency, and necessity of follow-up visits depend on the nature of the initial diagnosis and recommendations and its frequency may vary from several times daily to none at all. At least daily follow-up should be considered for several types of patients: those in restraints or on constant observation; those who are agitated, potentially violent, or suicidal; those with delirium; and those who are psychotic

or psychiatrically unstable. Acutely ill patients started on psychoactive medications should be seen daily until they have been stabilized.

Follow-up visits reinforce the consultant's recommendations, psychopharmacological monitoring, and prevention of behavioral or psychiatric relapse and allow the consultant to evaluate the results of their recommendations.[18] Frequent follow-ups are found to improve psychosocial outcome, enhance adjustment to physical illness, and decrease length of stay.[19]

Outpatient follow-up

It is the responsibility of the C-L psychiatrist to recommend patients for outpatient psychiatric follow-up when necessary and to discuss the recommendations with both the patient and the consultee. The eventual disposition of a patient is determined by the nature of the psychiatric problem and the physical, psychological, economic, and social resources of the patient. When the decision to stop seeing a patient has been made, the consultant should discuss the planned termination with the consultee and with the patient.

Communicating with the treatment team

Communication is an integral part in consultation-liaison hence C-L psychiatrist should have following communication skill: ability to manage the referral process and to obtain necessary information prior to seeing a patient; ability to interview medically ill patients and their relatives; understanding the issues of transference / countertransference in the relationship between physicians, staff, and patients; explaining to patients the causation of their disorder and its treatment when there are physical and psychological contributory factors present; communication with severely ill patients and dying patients and their loved ones; ability to advise consultee on the management of noncompliant patients; ability to record appropriate details in general medical notes in a language easily understood by all medical and nursing attendants with preserving confidentiality; communication with other specialties' colleges and nurses; and communication with mental health providers outside the hospital.[20] As the primary physician is responsible for following up our recommendations and immediate personal contact facilitate an integrated team approach to the patient's management. Hence whenever possible use the consultation as an opportunity to inform and educate the requesting physician and staff about psychiatric disorder, prescribed treatment, and how to approach in such cases.[10]

Conclusions

In this modern era, psychiatric needs of physically ill patients are rising. Consultation-liaison psychiatry should flourish because the substantial presence of this subspecialty means better medical care through the direct clinical work of its practitioners along with teaching and research activities. To achieve these goals, C-L psychiatrist should have holistic approach in performing his/her multiple roles. In future, new clinical challenges are going to emerge which will further enhance the roles of a C-L psychiatrist.

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Review article

Evaluation and management of delirium

BS Chavan, Suravi Patra

Abstract

Delirium, an altered mental state, occurs more frequently in hospitalized patients, but often goes unrecognized by health care providers. In the medical setting, delirium has been documented as ranging between 10% and 50% and even as high as 80% in postoperative, intensive care, geriatric wards. Although a temporary condition, successful treatment depends on the early identification and medical management of the underlying condition that has triggered such a state. This article reviews the presentation, evaluation and management of delirium.

Keywords*: delirium, confusional state, encephalopathy, cognitive impairment*

Introduction

Delirium is a transient global disturbance of cognition and attention.[1] The word 'delirium' is derived from Latin words meaning 'off the track', implying away from normal consciousness.[2] It is a neuropsychiatric condition associated with impairment in cognition, sensorium, perception, alertness, sleep-wake cycle, psychomotor and behavioural disturbances. The onset is acute, course fluctuating and presentation varies among different populations. The disturbance is conceptually reversible and it is managed as a medical emergency. The clinical features of delirium are described in Table 1.[3] The core features of delirium are deficits in attention, sleep-wake cycle disturbance and changes in motor activity. Other symptoms co-occur in different frequencies. In Diagnostic Statistical Manual of Mental Disorders (DSM-IV),[4] delirium is defined as an "acute disturbance of consciousness with inattention accompanied by a change in cognition or perpetual disturbance that develops over a short period and fluctuates over time". The ICD 10 conceptualization of delirium is almost the same with emphasis on impairment of immediate and recent memory and disorientation to time, place and person.[5] Other terms used to describe the acute cognitive change associated with delirium include "ICU psychosis, septic encephalopathy, acute confusional state, acute organic brain syndrome, acute brain failure and acute cerebral insufficiency".[6]

Delirium impairs physical, psychological as well as cognitive functioning. Delirium can cause aspiration, prolonged immobility and loss of independence. It increases both morbidity and mortality rate, increases length of hospital stay, adversely affects functionality and increases the need for institutional care. Delirium is more common in old age, cognitive impairment, coexisting physical illness like renal or hepatic

Table-1: Clinical features of delirium

Acute onset	Symptoms appear within a period of hours or days
Fluctuating course	Severity of symptoms vary over a 24 hour period
Presence of lucid intervals	Symptoms disappear for some time during the day
Inattention	Difficulty in focussing, sustaining and shifting attention
Conversation difficulty	Difficulty in maintaining conversation
Disorganized thinking	Manifested by incoherent, irrelevant or disorganized speech, illogical flow of ideas
Clouding consciousness	Reduced clarity of awareness of environment
Cognitive deficits	Multiple like disorientation, deficits in memory and language
Perceptual disturbances	Illusions, hallucinations
Psychomotor disturbances	Hyperactive delirium marked by agitation, hypoactive delirium marked by lethargy and decreased activity
Altered sleep-wake cycle	Day time drowsiness and night time insomnia, fragmented sleep or sleep cycle reversal
Emotional disturbances	Intermittent symptoms of anxiety, paranoia, fear, apathy, euphoria

impairment or in ICU admissions.[2] Depending on difference in psychomotor activity, delirium is classified as hypoactive, hyperactive and mixed. Hyperactive delirium is associated with restlessness and agitation whereas hypoactive is marked by lethargy and decreased motoric activity. The stability of the psychomotor activity is till date not established.

Diagnosis

Diagnosis of delirium is made after careful history taking and clinical assessment. History and physical examination are done to confirm the diagnosis and to identify the potential contributory causes. Important components of history and physical examination for delirium are mentioned in Table 2.[7]

Table-2: Key points to be noted during history taking and physical examination.

Key points	Observation to be made
History	
Time course of symptoms	Abrupt onset and fluctuating course of cognitive changes when reported by family members indicate delirium.
Changes in cognitive functioning appear with some other events like physical symptoms and changes in medicines like sedatives hypnotics, anxiolytics etc.	History can be verified from family members.
Sensory deprivation	Absence of glasses or hearing aids usually used by the patient.
Pain	Pain may manifest as delirium.
Physical examination	
Vital signs	For example, decreased oxygenation may be a cause of delirium.
General physical examination	May give the underlying cause of delirium.
Neurological examination	Usually intracranial events are not seen in delirium.
Cognitive functioning	Disorientation and inattention are hallmarks of delirium.

Laboratory testing, brain imaging and electroencephalography: Based on history and physical examination, laboratory tests help to identify the underlying causes of delirium. These tests do not substitute for history and physical examination, but are very useful to find out the possible causes of delirium suspected on history and physical examination. (Table 3).[7] Positive findings on these tests are the guiding principles for management of the condition.

examination. Any impairment in consciousness and attention indicates presence of delirium.

Screening methods are similar to diagnostic ones. Confusion Assessment Method (CAM) diagnostic algorithm is the briefest diagnostic instrument available. The instruments examine four key features of delirium: (a) Acute change in mental status and fluctuating course, (b) Inattention, (c) Disorganized thinking, and (d)

Table-3: Important laboratory investigations for diagnosis and management of delirium.

Investigation	Possible causative factor(s)
Complete blood count	Anaemia and infection
Serum electrolytes	Disturbance in electrolyte levels: hypo and hyper natraemia
Blood Urea Nitrogen, creatinine	Dehydration and renal failure
Glucose	Hypoglycaemia, hyperglycemia, hyperosmolar state.
Albumin, bilirubin, INR (International Normalized Ratio)	Liver failure and hepatic encephalopathy
Urinanalysis	Urinary tract infection.
Chest X ray	Pneumonia or Congestive cardiac failure.
Electrocardiogram	Myocardial infarction and arrhythmia.
Arterial blood gases	Hypercarbia in chronic obstructive pulmonary disease.
Drug levels	May give the underlying cause, at other times may be normal even in delirium.
Toxicology	If ingestion is suspected.
Cerebral imaging	High suspicion of stroke and haemorrhage based on history or physical examination.
Lumbar puncture	High index of suspicion of meningitis or subarachnoid haemorrhage based on history or physical examination.
Electroencephalography	Usually shows diffuse slow wave activity but of no use in evaluation or management of delirium.

Primary diagnosis of delirium is based on clinical assessment at bedside. The changing pattern of behaviour/ symptoms should create suspicion of delirium. The behaviour changes may affect cognition, perception, physical function or social behaviour. If any of these is present, a formal clinical assessment for delirium has to be done. *The most important component of clinical assessment is mental status* Abnormal level of consciousness. CAM algorithm can be used for making a diagnosis of delirium (Table 5). Diagnosis of delirium by CAM requires the presence of features 1 and 2 and either 3 or 4. Although CAM is considered to be an accurate approach for diagnosis of delirium, sensitivity varies depending on the assessment methods used. Completing CAM using routine observations from clinical care is often not

sufficient, standardized mental status assessment should be done to improve sensitivity of CAM. A clinical assessment based on CAM (short version) or DSM IV can be done to confirm the diagnosis (2). The screening tests can be divided into:

A. Scales used for assessment of delirium among patients admitted in ward

(i) Abbreviated Mental Test (AMT): This test can be administered by any personnel and the test was introduced to quickly assess elderly patients for the possibility of dementia. It is a screening instrument for cognitive impairment and takes 5 minutes to complete 10 questions. Maximum score is 10. A score of less than 7 suggests cognitive impairment but is not reliable in identifying delirium.[8]

(ii) Clock-drawing Test: It can be used by untrained nurses or volunteers and is used for screening of cognitive disorders. The test can be administered in three formats: in the free-drawn method, the patient is asked to draw a clock from memory; in the pre-drawn method, the patient is presented with a circular contour and is expected to draw in the numbers on the clock face; or in the third method the patient is asked only to set the hands at a fixed time on a pre-drawn clock, complete with contour and numbers.[9]

(iii)Cognitive Test for Delirium (CTD): It is a brief broad measure of cognitive function and was designed for delirious patients who cannot speak. It tests orientation, attention, visual memory, and conceptual reasoning and correlate highly with the Mini-Mental State Examination (MMSE) in delirious patients. A suggested cut-off score for delirium is 19 points.[10]

(iv)Neelon and Champagne Confusion Scale (NEECHAM): NEECHAM can be rapidly completed (during 10 minutes) by a nurse at the bedside using a structured database derived during routine nursing assessments and interactions with patients. NEECHAM places a minimal response burden on the patient, and it is comprised of items that have no learning effect, testing can be repeated at frequent intervals to monitor changes in the patient's cognitive status which is important in delirium. It can detect delirium in its early stage, and is sensitive to both the hyperactive and hypoactive variants of delirium.[11]

(v) CAM (short version): It assesses the following 3 criteria; acute onset and fluctuating course; inattention; and disorganised thinking or altered level of consciousness. Trained healthcare professionals (Table 4).[12]

(vi) CAM (long version): The assessment is based on the following 10 criteria: acute onset, inattention, disorganised thinking, and altered level of consciousness, disorientation, memory impairment, perceptual disturbances, psychomotor agitation, psychomotor retardation, and altered sleep-wake cycle. Trained healthcare professionals.[13]

(vii) DRS-R-98: It can be administered by trained healthcare professional; the revised version of the DRS, allows assessment for both diagnosis of delirium and severity of delirium. This 16-item scale includes 3 'diagnostic items' (temporal onset, fluctuation and physical disorder) and 13 'severity symptoms' (attention, orientation, memory [short and long-term], sleep-wake cycle disturbances, perceptual disturbances and hallucinations, delusions, liability of affect, language, thought process abnormalities, visuospatial ability and motor agitation or retardation). Scores range from 0 to 44, and patients with a score of at least or over 17.75 points were screened as positive for delirium.[14]

(viii) Mini Mental State Examination (MMSE) or other cognitive assessment instrument; used to screen for cognitive impairment. (range 0 to 30); a Score of 23 or

less is considered to be indicative of cognitive impairment.[15]

(ix) Delirium Index (DI): It is designed to be used in conjunction with the MMSE, for the measurement of severity of symptoms of delirium based solely on observation of the patients. Patients are assessed on the following seven domains: inattention, disorganised thinking, and altered level of consciousness, disorientation, memory impairment, perceptual disturbances, and motor disturbances. Score range from 0 to 21, with 21 points indicating maximum severity.[16]

B. Assessment of Delirium in patients admitted in ICU

(i) CAM-ICU (Confusion Assessment Method): The CAM-ICU is a specific application of the CAM algorithm that uses nonverbal responses from the patient to assess attention, thinking, and level of consciousness. The CAM-ICU is valid, reliable, and can be completed in a few minutes. CAM-ICU is not only adequate for screening but also a good confirmatory diagnostic tool for delirium in critically ill.

(ii) ICDSC (Intensive Care Delirium Screening Checklist): It allows the diagnosis of sub-syndromal delirium, which has potential prognostic implications[17] and can identify patients with potential therapeutic benefit.[18] *The CAM-ICU and the ICDSC are the most studied tools for the diagnosis of delirium in critically ill patients*

(iii) RASS (Richmond Agitation Sedation Scale) (together); It can be used by trained healthcare professional. This is a ten point scale that can be rated briefly using three clearly defined steps and has discrete criteria for levels of sedation and agitation. Its unique feature is that it uses duration of eye contact following verbal stimulation as the principal means of titrating sedation.[19]

Management

An optimal management of delirium requires a *three pronged focus: prevention, identification and treatment*. Primary prevention of delirium is the most effective way to manage delirium because once an episode of delirium has occurred, non-pharmacological approaches become ineffective. A prospective multicomponent intervention for prevention of delirium in hospitalized old patients should target six risk factors for delirium: (a) cognitive impairment, (b) sleep deprivation, (c) immobility, (d) visual impairment, (e) hearing impairment, and (f) dehydration. The authors found that the

Table-4: The Confusion Assessment: Method Diagnostic Algorithm

Feature 1. Acute change in mental status & fluctuating course	• Is there evidence of an acute change in cognition from baseline?
	• Does the abnormal behavior fluctuate during the day?
Feature 2. Inattention	• Does the patient have difficulty focusing attention (e.g., easily distracted, has difficulty keeping track of what is being said)?
Feature 3. Disorganized thinking	• Does the patient have rambling or irrelevant conversations, unclear or illogical flow of ideas, or unpredictable switching from subject to subject?
Feature 4. Abnormal level of consciousness	• Is the patient anything besides alert—hyperalert, lethargic, stuporous, or comatose?

The diagnosis of delirium requires features 1 and 2 and either 3 or 4.

Table-5: List of various instruments used for assessing delirium

Instrument	Type
Mini Mental Status Examination (MMSE)	Assessment of cognitive function
Cognitive Test for Delirium (CTD)	Assessment of cognitive functions
NEECHAM confusion scale	screening instrument for delirium
Nurses Delirium Screening Scale	screening instrument for delirium
Delirium Observation Scale	screening scale for delirium
Confusion Assessment Method	screening instrument for delirium
Delirium Symptoms Interview	lay person interview
Confusion Assessment Method for ICU	Screening instrument for delirium in ICU
Delirium Rating Scale Revised version 98 (DRS-R98)	Diagnostic instrument based on DSM IV criteria.
Delirium Assessment Scale(DAS)	Scale to measure severity of delirium.
Delirium Index	Scale to measure severity of delirium.
Delirium O Meter	Scale to measure severity of delirium.
Memorial Delirium Assessment Scale (MDAS)	Scale to measure severity of delirium.

intervention was more effective than treatment as usual in preventing delirium.[16]

Management of delirium after clinical manifestation does not need mandatory hospitalization. A decision to hospitalize a patient should be taken after considering clinical stability and available support. Outpatient management can be done if the diagnostic work up is possible, safety of the patient is assured and the condition causing delirium is clearly known which can be corrected. In other conditions, hospitalization should be done. Hospitalization is essential when the patient is suffering from a destabilizing medical condition like myocardial infarction.[17]

Non-pharmacologic Management

Non-pharmacological measures are the cornerstone of delirium treatment. First and foremost, management involves identification and treatment of underlying disease processes as well as removal and reduction of associated contributing factors. Such factors include psychoactive medications, fluid and electrolyte abnormalities, severe pain, hypoxemia, severe anaemia, infections, sensory deprivation, and significant immobility. Provide communication, orientation and reassurance to patient diagnosed with delirium. Take help of family members and provide a supportive environment.

Specific non pharmacological means include:[20]

1. *Environment*: not having excessive, inadequate or ambiguous sensory input, medication not interrupting sleep, presenting one stimulus or task at a time
2. *Orientation*: room should have a clock, calendar, and chart of the day's schedule; evaluate need for glasses, hearing aid
3. *Familiarity:* objects from home, same staff, family members staying with patient, discussion of familiar areas of interest,
4. *Communication*: clear, slow, simple, repetitive, facing patient, warm, firm kindness, address patient by name, identify self, encourage verbal expression
5. *Activities*: avoid physical restraint, allow movement, encourage self-care and personal activities
6. *Restraints*: use of physical restraints should be done with utmost precaution as it is found to be an independent risk

factor for delirium. Nonetheless, it should be used to control violent behaviour and to prevent pulling of iv lines, endotracheal tubes etc. many times calm reassurance provided by a family member is often more successful than use of a restraint.

Pharmacological management

Primary treatment of delirium is identification and treatment of its causative factor. Medications are used for agitation, delusions and hallucinations which are frightening to the patient. Verbal assurance and comfort by family member and hospital staff often can control such behaviours. Medications should be used judiciously as they can prolong delirium or can change hyperactive delirious state into stupor.

1. **Haloperidol:** It can be given both orally or by enteral tube within 2 h of the diagnosis of delirium, initially 2.5–5 mg every 8 hours (patients over 60 years should get 0.5–1 mg), then it can be titrated based on clinical judgement for symptom management. Haloperidol can also be given through intramuscular injection (2.5–10 mg per day) depending on the response. In older patients with mild delirium, low doses of haloperidol (0.5 to 1 mg orally or 0.25 to 0.5 mg parenterally) should be used initially, with careful reassessment before increasing the dose. In more severe delirium, somewhat higher doses may be used initially (0.5 to 2 mg parenterally) with additional dosing every 60 minutes as required. Haloperidol should be avoided in older persons with Parkinsonism and Lewy body disease—an atypical antipsychotic with less extrapyramidal effects may be substituted. Higher-dose intravenous haloperidol may be the drug of choice for critically ill patients in the ICU setting. For such patients, the risk–benefit ratio of medication adverse effects versus the removal of lines and devices often favours pharmacologic treatment. In all cases where such "pharmacologic restraints" are used, the health care team must clearly identify the target symptoms necessitating their use, frequently review the efficacy of these drugs in controlling the target symptoms, and assess the patient for adverse effects and complications. In a randomized trial comparing haloperidol, chlorpromazine, and lorazepam in the treatment of agitated delirium in young patients with AIDS, all were found to be equally effective; however, haloperidol had the fewest side effects or adverse sequelae.
2. **Olanzapine:** It should be given within 2 hours of the diagnosis of delirium, orally or through enteral tube in a dose of initially 5 mg per day (patients over 60 years should be given 2.5 mg) and then the drug should be titrated based on clinical judgement.
3. **Amisulpride:** The dose varies from 50–800 mg/day
4. **Quetiapine:** The dose varies from 50–300 mg/day.

All atypical antipsychotics have been tested only in small equivalency trials with haloperidol. The Food and Drug Administration (FDA) has attached warnings to these agents because of the increased risk for stroke and mortality that has been associated with long-term use, primarily for agitation in dementia.

Cochrane review concluded that there is no evidence that haloperidol in low dosage has different efficacy in comparison with the atypical antipsychotics Olanzapine and Risperidone in the

management of delirium or has a greater frequency of adverse drug effects than these drugs. High dose haloperidol was associated with a greater incidence of side effects, mainly Parkinsonism, than the atypical antipsychotics. Low dose haloperidol may be effective in decreasing the degree and duration of delirium in post-operative patients, compared with placebo.[1]

Table-6: Summary of pharmacological treatment

Medication	Class	Dosage	Notes
Haloperidol	Typical antipsychotic	0.25-1mg PO or IV, 4 hourly or as needed	Relatively nonsedating. Agent of choice, can cause EPS.
Olanzepine	Atypical antipsychotic	2.5-10 mg PO OD IM daily	Fewer EPS than haloperidol, more sedating than haloperidol.
Quetiapine	Atypical antipsychotic	25-50 mg PO bid	Fewer EPS than haloperidol, more sedating of atypical antipsychotics, hypotension.
Risperidone	Atypical antipsychotic	0.25-1 mg PO or IV 4 hourly	Relatively non- sedating, slightly fewer EPS than haloperidol.
Lorazepam	Benzodiazepines	0.25-1 mg PO or IV tid as needed for agitation.	Use in sedative and alcohol withdrawal. More paradoxical agitation and respiratory depression than haloperidol.

*PO= per oral, IM= intramuscular, IV= intravenous, EPS= extrapyramidal side effects

Newer advances

Management of agitated delirium in ICU set up is often problematic owing to its association with self extubation and removal of vascular catheters. Haloperidol is the drug of choice in managing delirium in ICU but it has side effects like EPS, Neuroleptic Malignant Syndrome (NMS) and prolongation of QT interval which has grave consequences in the ICU. Dexmedetomidine, selective α_2 agonist, has its inherent analgesic action. It is a *sedative* medication used by intensive care units and anaesthetists. It is relatively unusual in its ability to provide sedation without causing *respiratory depression;* in addition to its propensity to cause less side effects and minimal interactions with other medications. These qualities have made it an ideal agent for management of delirium in the ICU. In a recent RCT, authors concluded that dexmedetomidine significantly shortened time to extubation and decreased ICU length of stay and suggested it to be a promising agent for management of delirium in ICU.[21]

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Review article

Depression in medical settings

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Abstract

Depression is very common in general medical settings, where there is substantial under identification and unmet need for mental health services. It is associated with personal suffering and decreased quality of life and functioning. Patients with unrecognized depression consult with their physician more frequently, and consume greater health care resources. The presence of depression in conjunction with physical illness also adversely affects the outcome of both disorders. This article reviews presentation, evaluation and management of depression in medical setting and associated difficulties and challenges.

Key words: *depression, medicine, general hospital, medical setting.*

Introduction

Patients with Depression are more likely than non-depressed patients to have longer hospital stays and more outpatient visits, suffer greater disability, have poorer quality of life, and experience suicidal thoughts and even commit suicide. Major depression is at least twice as common in hospitalized medical patients compared to depression in the general population. The prevalence of major depressive disorder (MDD) in patients with co-morbid medical illness can be as high as 30% in the hospital setting.[1] Presence of co-morbid depression is predictive of worse outcomes of medical illness and increased mortality.[2] Depression in medical illness often goes untreated as the concern remains the medical illness. Studies have shown that treatment of even minor or sub-syndromal depression has beneficial effects on the overall functioning of the physically ill individual and enhances treatment compliance for the co-existing medical illness and the recovery and rehabilitation process.[3] It has been well established that in patients with type-2 diabetes, MDD is both a precursor as well as a co-morbid illness. Same is true for the case of cerebrovascular and cardiovascular diseases.[4,5]

Depression and medical illness

The association of depression and physical illness can be understood as follows: First, depression can be caused by an underlying physical illness or be an exacerbated response or a reaction to the illness.[6] Second, depression can be a consequence of treatment of physical illness with medications (eg, anti-hypertensives, corticosteroids, and other immunosuppressants) or cancer treatments, especially with interferons.[7] Third, depression may be a consequence of various medical illnesses. Depression occurs in approximately 30% to 40% of patients

with acute stroke or myocardial infarction, and has been linked to poorer cognitive and physical recovery. Fourth, depression can be a complication.[8] Depression should be considered a new strong risk factor among other pre-existing risk factors, especially anxiety or panic states, through increased sympathetic activity; mobilization of free fatty acid from adipose tissue; thrombogenicity and platelet activation, agglutination; thrombus formation; and inflammation, particularly in coronary and cerebrovascular disorders; and possibly in other conditions. Fifth, depression may be a coexistant, pre-existant, or coincidental association to a physical illness. Sixth, depression can be contextual; it may be an effect of illness and its impact on life situations (eg, personal, job, relationships, finances) or in the context of metabolic disturbances (eg, hypoactive delirium presenting as depression). Seventh, depression may be a cue or clue to an underlying illness or a prelude to yet to be diagnosed major illness, especially in those who have the first onset of depression in mid-life or later. Approximately 33% of Alzheimer's patients experience depression in the prodromal and early stages of dementia.[5] Last, depression may be a contributing factor to the prolongation of the distress of a physical illness.

Diagnosing depression in medical illness

Diagnosis of depression in the medically ill can be difficult for the following reasons.[9] First, it may be regarded as a "normal" reaction to physical illness. Second, common vegetative symptoms include weight loss, fatigue, weakness, and anorexia often due to the medical illness. Third, it is difficult to distinguish onset of a depressive syndrome from psychological reactions to life-threatening illness. Last, the effects of impaired cognitive functioning secondary to the medical illness itself may detract from the detection of depression. As a result, the symptom pattern cannot be relied upon to a make a definitive diagnosis.[10]

Screening instruments such as the Beck Depression Inventory, Hamilton Depression Rating Scale, and many others can be used but these scales cannot replace clinical assessment. When usual resilience to illness is replaced by pervasive low mood, depression characterized by lack of interest in life should be strongly suspected; empirical trial of treatment should be considered, especially in view of newer, safer antidepressants and psychological treatments.[11] Although depression associated with medical illness has been shown to increase mortality, the benefits of treating depression on medical morbidity and mortality have yet to be established.[12]

Approaches to detect comorbid depression

The Inclusive Approach

Symptoms appearing to be caused by a medical condition (eg, fatigue), the inclusive approach considers all symptoms describing depression. The inclusive approach is easy to use and sensitive to functional impairment.[13]

Substituting the "Classic" Vegetative Symptoms

Classic vegetative symptoms such as change in appetite and sleep, fatigue and loss of energy, diminished ability to think or concentrate, indecisiveness, psychomotor slowing, tearfulness, depressed appearance, social withdrawal and decreased talkativeness, brooding, self-pity, pessimism, lack of reactivity to environmental events, and latency in responses are all indicative of depressive disorder.[14]

Focus on symptoms of depression

Prime medical questions eliciting emotion and cognitive symptoms need to be asked.[15,16,17]

Situations such as being bothered by the feeling of sadness, hopelessness, crying spells during the last one month, should be explored. Patient could be directly asked if he or she felt sad or depressed, which seems to be the simplest and most yielding research question.

The conventional classification systems that are in use in psychiatry contribute to inability to identify depression in medical setting.[18] These classification systems are often not helpful in patients with physical illness.[19] That's because these systems largely depend on vegetative symptoms, as part of their diagnostic criteria.[20] Symptoms such as sleep or appetite disturbance, changes in weight, changes in neurocognitive status, short-term memory or concentration, or changes in energy level also are symptoms of the underlying physical illness itself and then it becomes hard to tease out what's the underlying physical illness.[21,23,24] It is difficult to know the contribution of depression and also it makes it hard to gauge the severity of depressive symptoms.[25,26] Among mental health experts there is no consensus about the appropriate diagnostic criteria or classification systems to use in these patients. Physicians and patients themselves often assume that these symptoms are a reaction to the underlying physical illness, or part of the disease process itself, so they often feel that they don't merit separate identification assessment or intervention.[27]

Prevalence of depression in medical conditions

Cardiovascular system

The damage to the heart, with its symbolic meaning as the essence of the human being may shatter the patient's sense of wholeness and safety.[28] As first reported by Frasure-Smith et al,[29] MDD in patients hospitalized following a myocardial infarction is an independent risk factor for mortality at 6 months and increases mortality 3-5 fold. Its impact is at least equivalent to that of left ventricular dysfunction and history of previous myocardial infarction. A prospective cohort study by Surtees et al[30] found that MDD was associated with an increased risk of ischemic heart disease mortality. This association was independent of established risk factors for ischemic heart disease and remained undiminished several years after the original assessment. It has shown that, after acute coronary syndromes, depressed patients have elevated levels of inflammatory markers, thus suggesting chronic endothelial activation among these patients.[31] Depression may itself predispose to vascular disease. Mechanisms proposed for the linkage between depression and cardiovascular disease include the effects of hypercortisolemia (glucocorticoids inhibiting inflammation processes[38] or by reducing glucocorticoid signaling leading to abnormal brain functioning,[32-34] immune activation, depression-related platelet aggregation leading to increased thrombosis, depression-induced impairment of arterial endothelial functioning, and abnormal folate or homocysteine metabolism. Although these mechanisms have been proposed to relate depression to cardiovascular diseases, depression could also be linked to cerebrovascular disease.[32]

Cerebrovascular system

Depression occurs in approximately 40% of patients with acute stroke and has been linked to poorer cognitive and physical recovery. An association between depressive symptoms and stroke mortality was reported by Morris et al,[35] who found that stroke patients with in-hospital depression were 3.5 times more likely to die during 10 years of follow up than patients without depression. Treatment with fluoxetine or nortriptyline for 12 weeks during the first 6 months poststroke significantly increased the survival of both depressed and nondepressed

patients. This finding suggests that the pathophysiologic processes determining the increased mortality risk associated with post stroke depression last longer than the depression itself and can be modified by antidepressants.[36]

Whether depression is a "contributor or a consequence" of both cardiovascular and cerebrovasular pathologie.[37,38] It remains possible that the high rate of depression in both conditions represents a common vascular mechanism.[39]

Cancer

The prevalence of depression among cancer patients ranges between 23% and 60%. Acute stress and anxiety and/or dysphoric states following discovery of cancer (a traumatic life event) are poorly understood in traditional medical settings. Pain and depression are the most common neuropsychiatric presentations, and they are followed by fatigue, distress, and various disabilities. As the disease progresses, immunologic changes and the effect of treatment could be an additional burden contributing to MDD. Increased levels of cytokines, (eg, interleukin) secreted by the immune system to fight cancer or infections could also result in "sickness behavior syndrome," characterized by a depressed mood, sleepiness, and poor concentration.[40] Higher than normal plasma IL-6 concentrations were associated with a diagnosis of MDD in cancer patients. IL-6 may contribute to sickness behavior that has overlapping symptoms with MDD.[41] While helping to bolster the immunologic response, it is equally important to acknowledge the patient's symptoms and treat them vigorously with cognitive-behavioral therapy, stress management, and antidepressant drug therapy.

Diabetes mellitus

Depression as a precursor and as a consequence to type 2 diabetes has been studied. Prevalence of depression in adult diabetics is 3–5 times compared to prevalence in general population. 14% to 15% of patients diagnosed with type-2 diabetes have MDD. 33% of all patients with neuropathy, retinopathy, and nephropathy are depressed. MDD in diabetes indicates poorer prognosis, worse glucose control, increased symptoms, decreased adherence to prescription plans, increased complications, decreased overall functional well being, and occasionally suicidality with complications. Following a large population-based study in Norway, Engum et al[21] concluded that diabetes did not predict symptoms of depression or anxiety. Rather, symptoms of depression and anxiety emerged as significant risk factors for onset of type-2 diabetes independent of established risk factors for diabetes, such as socioeconomic factors, lifestyle factors, and markers of the metabolic syndrome. European Association for the Study of Diabetes,[42] adds to a growing body of evidence linking depression and other mental disorders to diabetes risk. Symptoms of depression or psychological stress were associated with increased risk of type-2 diabetes in men, but not in women, as per Swedish researchers "People with diabetes had a higher prevalence of all mental illnesses compared with people without diabetes," according to researchers from Canada.[43] In particular, they noted that the rate of affective and anxiety disorders was >30% higher in people with diabetes who were <50 years of age. Other researchers have found hippocampal changes in patients with juvenile onset diabetes.

Neurological illness

Depression in neurologic illnesses[44] is as follows: Alzheimer's disease 0% to 57%, Parkinson's disease 25% to 50%, Post stroke (within first 2 years after initial stroke) 30% to

60%, Huntington's disease 50%, and Multiple sclerosis 50%

Aging, frailty, and Alzheimer's disease

Physical frailty and need for assistance in daily living often causes dysphoria. However, depression should not be accepted as a normal part of aging, as untreated depression in the elderly causes needless suffering. Depression can render mild cognitive impairment to appear like dementia, thus confounding diagnosis and prognostication. A history of early onset depression increases the risk for Alzheimer's disease compared to those with no history.[45]

HIV/AIDS

In addition to social stigma in the early stages, even when physically well, drug issues, HIV's later physical effects of nausea and fatigue with antiretrovirals, HIV-related apathy, mood disorders, and cognitive impairments are seldom recognized early in the course of the disease. The cerebral events may remain compartmentalized and not necessarily reflected in the routine assessment of peripheral markers such as viral loads or T-cell counts.[46]

Conclusion

Not only that depression contributes both to disability and diminished survival among medically ill, it is increasingly evident that MDD is a multi-systemic disorder that affects both brain and bodily functions.[47] The inter-relationship between the two is rather complex. Inflammation could be the common link through neuroimmuno-endocrine mechanisms contributing to both psychological and somatic symptoms such as depression and cardiovascular diseases.[27,47,48] As more evidence accumulates, it seems clear that late-onset depression in particular is not just a mood disorder but could be a warning signal of an impending major or catastrophic physical illness. It is well known that depression is a heralding symptom of undiagnosed medical conditions including multiple sclerosis, Parkinson's disease, hypo- or hyperthyroidism, Cushing's disease, and pancreatic cancer. The assessment of both conditions and the interaction between them is critical in managing these patients.[48] When the medical illness is treated, the depression often gets better. While the importance of recognition and treatment of co-morbid depression in helping reduce disability and suffering is very clear, the effect of treatment on the course of the co-morbid illnesses themselves and the overall effect on survival need to be further studied. Considering the available evidence, it is clearly prudent to include aggressive treatment of co-morbid depression, utilizing all available modalities- including psychopharmacologic agents, in the management of all physical illnesses.

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Review article

Psychiatry and Endocrine Diseases

Rakesh K. Chadda

Abstract

The paper discusses the interface between psychiatry and endocrinology. Common psychiatric problems occurring in endocrine disorders and their management are discussed with case vignettes. Focus is on basic clinical management. A brief screening for endocrine disorders in patients presenting with common psychiatric symptoms is also suggested. The paper focusses on clinical presentation and management of common psychiatric problems occurring with illnesses of thyroid, adrenals, parathyroid, pituitary, diabetes mellitus and hyperprolactemia.

Key words: *Endocrine, Hypothyroidism, Consultation-liaison.*

Introduction

Endocrinology and psychiatry have a complex relationship. Earliest manifestations in a number of endocrine diseases sometimes may be in form of psychiatric symptoms, e.g. hyperthyroidism may present initially in form of anxiety symptoms or an undiagnosed hypothyroidism may present as a depressive syndrome. Some of the common endocrine diseases associated with psychiatric disturbances include diabetes mellitus, hypothyroidism, hyperthyroidism, Cushing's syndrome' Addison's disease, hypoparathyroidism, hyperparathyroidism, diabetes inspidus and hypopituitarism. Similarly, during the course of an endocrine disease, different kinds of psychiatric syndromes are not uncommon. A number of medications used in psychiatry also have endocrine side effects.

This paper will be discussing some practical issues of clinical relevance related to the complex interaction between endocrine diseases and psychiatric disorders. The paper is not a systematic review and discusses mainly some clinical issues of relevance with case vignettes.

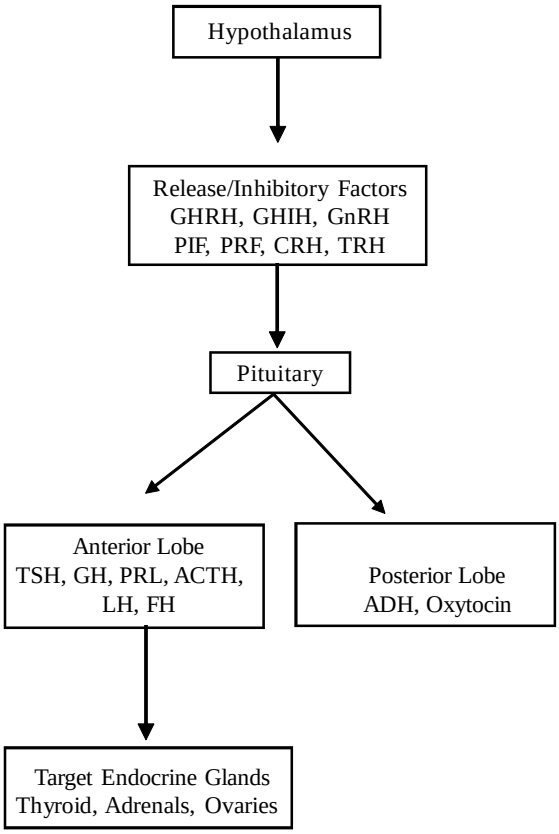
Hypothalamus – Pituitary – Endocrine Axis

Endocrine function is centrally controlled by the hypothalamus which regulates it through the pituitary gland. The hypothalamus receives regular feedback from the endocrine glands by blood levels of the hormones secreted by them into the blood. Fig 1 depicts the functioning of the hypothalamo-pituitary-endocrine axis.

Hypothalamus secretes various release and inhibitory factors like thyrotropin release hormone (TRH), growth hormone release hormone (GHRH), growth hormone release inhibiting hormone (GHIH), also called somatostatin, gonadotropin release hormone (GnRH), corticotrophin releasing hormone (CRH), prolactin-inhibiting factor (PIF) (i.e., dopamine), and prolactin-releasing factor (PRF), which regulate the release of thyroid stimulating hormone (TSH), growth hormone, luteinisng

hormone (LH), follicle stimulating hormone (FSH), adrenocorticotropin hormone (ACTH) or corticotrophin and prolactin respectively by the pituitary. TSH, FSH, LH, and ACTH further regulate the functioning of their target glands (thyroid, ovaries, and adrenal cortex). TSH, GH, prolactin, ACTH, LH and FSH are secreted by anterior pituitary. Posterior pituitary stores two hormones: antidiuretic hormone (ADH or vasopressin), which regulates fluid balance, and oxytocin, which is necessary for milk let-down during breastfeeding. ADH and oxytocin both are produced by the hypothalamus.[1,2]

Fig. 1: Diagrammatic Representation of HPA Axis



Endocrine disorders and psychiatry

Endocrine diseases may initially present only with psychiatric symptoms early in the course. For example, patients with hyperthyroidism may present initially with predominantly anxiety symptoms. In other cases, psychiatric symptoms may develop at a later stage as a reaction or complication of the primary endocrine illness. For example, depression may occur secondary to a complication in diabetes and may interfere with the control of illness. Psychiatric illness may also occur as a comorbid condition with the endocrine illnesses. An underlying endocrine illness may be as a possible cause of treatment resistance in psychiatric disorders.

Basic psychiatric assessment in CL psychiatry services

Certain basic investigations can be of great help in screening for endocrine illnesses in patients presenting to psychiatry services. This would help in identifying the co morbid endocrine illnesses at the earliest and help effective management of both psychiatric as well as the endocrine illness. These include fasting blood glucose, serum electrolytes, TSH (thyroid stimulating hormone) level and serum calcium.

Diabetes mellitus

Diabetes mellitus (DM) results from insufficient insulin secretion or resistance to insulin. DM is of two types, juvenile onset type or type 1 and adult onset type or type 2.

Type 1 diabetes has onset in childhood or early life and is characterised by no or limited insulin. It accounts for 5-10% of all patients with diabetes. It is usually due to an autoimmune pathology, which selectively destroys insulin-producing pancreatic β cells.

Type 2 diabetes is commonly seen in adults, although childhood onset is increasing. Patients usually have insulin resistance, but many later become insulin dependent. Genetic vulnerability and obesity are the common causes. Dietary

restriction and exercise are often sufficient treatments in early stages.

Psychiatric aspects of DM include reactions to the initial diagnosis, complications of the illness and intensification of treatment such as starting insulin. Chronic stressors and psychiatric symptoms can interfere with adherence to self-care regimens (e.g., diet, exercise, taking medications, cessation of smoking) and thus disease control. Family conflict regarding diabetes tasks such as following a new dietary regimen or increasing exercise may also interfere with treatment.

Common psychiatric disturbances in patients suffering from DM include anxiety disorders and depression, which may also coexist. Anxiety and depressive disorders are seen in up to 45% and 33% of patients with DM respectively. Presence of anxiety and/or depression is also important from the quality of life perspective, independent of severity of the primary illness, both affecting it adversely.[3] Presence of retinopathy along with a high depression score has been shown to have strong relationship with mortality in patients with DM.[4,5] Treatment of psychiatric comorbidity improves the primary disease.

The following case vignette discusses management of a patient of bipolar disorder who developed DM and hypothyroidism.

Thyroid disorders

Hypothyroidism: Clinical manifestations of hypothyroidism include fatigue, cold intolerance, lethargy, weakness, weight gain, constipation, menstrual irregularities, hair loss, slow reaction time, oedema, delayed reflexes, and bradycardia. Hypothyroidism is usually a result of primary failure or ablation of the thyroid gland, hypothalamic/pituitary dysfunction, auto immune thyroiditis, or lithium therapy. About 10% of patients taking lithium suffer hypothyroidism. Lithium-induced hypothyroidism is more common in women.[6]

Case Vignette 1: Bipolar illness with diabetes mellitus and hypothyroidism

Mr. K, a 56 year old male presented in emergency services with uncontrolled diabetes. He had also complaints of depressed mood, anhedonia, fatigue, hopelessness and suicidal ideation for about 2 months. He had suffered 2 manic and 3 depressive episodes in the previous one year and a total of 20 episodes in the last 20 years. He was also suffering from DM for the last 5 years and was being treated with oral hypoglycemics. Investigations revealed blood sugar of 400mg%, presence of urine ketones, raised HbA1c and raised TSH (12.56 IU/L).

Thus Mr. K had rapid cycling Bipolar affective disorder (BAD) with multiple medical comorbidities, which included poorly controlled DM (irregular with diet and oral hypoglycemics for last 2 months) and a newly diagnosed hypothyroidism. There was a poor compliance with medications due to multiple comorbidities.

Mr A was admitted in endocrinology ward of the hospital. DM was managed with insulin and thyroxine replacement was done for hypothyroidism. He was later shifted to psychiatry ward after managing DM and hypothyroidism. BAD was managed with augmentation of mood stabilizer and addition of low dose antidepressant.

Uncontrolled diabetes and undiagnosed hypothyroidism were complicating the BAD. In case of Mr. K, BAD was affecting the control of DM. A collaborative approach between psychiatry and endocrinology helped.

Psychiatric manifestations are quite common in patients with hypothyroidism. In some cases, hypothyroidism may initially present with depressive symptoms. About 5% of patients with major depressive syndromes may have subclinical hypothyroidism. Hypothyroidism can also interfere in cognitive functioning in the elderly and can present as cognitive deterioration amounting to dementia. Hypothyroidism is recognized as one of the treatable causes of dementia and can also lead to psychotic symptoms.[1,6]

In many patients with hypothyroidism, depression responds to thyroid hormone replacement alone, but response may be delayed. In delayed response, antidepressants can be used. Hypothyroidism is often responsible for treatment resistance in depression. In such cases, thyroid supplementation to the primary antidepressant therapy helps.

Hypothyroidism may also sometimes complicate schizophrenia. The following case vignette discusses management of a patient of schizophrenia complicated by hypothyroidism.

Hyperthyroidism: Common presenting symptoms of hyperthyroidism include nervousness, excessive sweating, heat intolerance, palpitations, fatigue, weight loss, tachycardia, dyspnoea, and weakness. Graves' disease, toxic adenoma, and toxic multinodular goiter are the common causes of hyperthyroidism. Less common causes include Hashimoto's thyroiditis, postpartum hyperthyroidism, and factitious hyperthyroid state.

Anxiety and depressive symptoms are seen commonly in patients of hyperthyroidism. Some patients of hyperthyroidism initially may present only with anxiety symptoms. Generalized anxiety disorder (GAD) is a common differential diagnosis. Psychiatric symptoms, if secondary, resolve in more than 90% cases, when the hyperthyroidism is treated effectively. Anxiety symptoms improve in direct relation to the reduction of thyroid hormone levels. However, depressive symptoms are not quite so linearly related and may resolve at a slower pace as

Case vignette 2: Schizophrenia with hypothyroidism, menstrual irregularities.

Ms. S, a 32 year old lady presented to the psychiatry services with a nearly continuous illness of 10 years duration, characterized by 3rd person-voices discussing about patient, voices coming from body parts, bizarre delusions, emotional blunting and social withdrawal. In addition, she had history of irregular menstrual cycles, weight gain and hirsutism. Due to poor control of the illness and multiple physical comorbidities, she was admitted under psychiatric services. For the hormonal problems, advice was taken from endocrinology. Thyroid function test, TSH/LH and ultrasound abdomen was advised by the endocrinologist.

Both antipsychotic medications as well as hypothyroidism had contributed to the weight gain. Physical comorbidities and drug induced side effects were interfering with adherence to treatment. Physical comorbidities included polycystic ovarian disease (PCOD) and hypothyroidism.

She had earlier been treated with risperidone and olanzapine. She was shifted to amisulpiride, with which she showed improvement, but developed hyperprolactinemia. Subsequently, she was shifted to clozapine. For hypothyroidism, thyroxin was added. She was also advised hormonal treatment by the gynaecologist.

thyroid hormone level normalizes.[6]

Parathyroid disorders

Parathyroid hormone (PTH) serves important functions in the body including mobilizing of calcium from bones, inducing renal reabsorption of calcium, increasing renal clearance of inorganic phosphate and promoting intestinal reabsorption of calcium.

Hypoparathyroidism commonly causes hypocalcaemia, which leads to neuromuscular irritability. Symptoms depend on level of blood calcium and rate at which hypocalcaemia develops. Clinical features include paraesthesias, carpal pedal spasm, laryngospasm, blepharospasm, and bronchospasm. It can also lead to cardiovascular complications like prolonged Q–T interval, heart block, and congestive heart failure. Neuropsychiatric symptoms are not common, though seizures have been reported in some cases.[1]

Causes of hypoparathyroidism include autoimmune destruction of the parathyroid glands, removal of the parathyroids during thyroid surgery, disruption of the glands' blood supply in tumour or neck irradiation.

In **hyperparathyroidism**, PTH is secreted inappropriately, despite an elevation in the ionized calcium levels. Hypercalcemia is the key feature, which is generally discovered on routine laboratory testing. Primary hyperparathyroidism is the most common cause for hyperparathyroidism in adults. Malignancy is another important cause. Presenting symptoms include nausea, vomiting, anorexia, constipation, proximal muscle weakness, polyuria, and polydipsia. Impaired renal function, hypertension, short Q–T interval, and bradycardia may also be seen.

Neuropsychiatric symptoms of hyperparathyroidism include lethargy, drowsiness, impaired concentration ability and depressive symptoms. Confusion and stupor or coma may be seen in severe cases. Severity of psychiatric symptoms intensifies as the level of hypercalcemia increases. Delirium, psychosis, and cognitive impairment are common in patients with serum calcium above 16 mg/dl. Depressive symptoms tend to resolve with treatment. Cognitive symptoms may improve, but some residual symptoms usually remain.[1]

Hyperparathyroidism should be kept as a differential diagnosis in patients presenting with multiple vague non-specific symptoms that suggest fibromyalgia and depression. Serum calcium levels should be checked early to identify hyperparathyroidism in such patients presenting in psychiatry.

Disturbances of adrenal cortex

Disturbances of adrenal cortex include Cushing's syndrome, resulting from its overactivity and Addison's disease, a result of reduced functioning of the gland.

Cushing's syndrome can be due to hypersecretion of cortisol by the adrenal glands, endogenous hyperproduction of cortisol or use of exogenous ACTH or glucocorticoid. Physiological release of cortisol occurs during periods of stress or duress. Elevations of serum cortisol may occur during the course of many psychiatric disorders like major depressive disorder, alcoholism, anorexia nervosa, panic disorder, and psychoactive substance-withdrawal syndromes.[1]

Clinical Picture of Cushing's syndrome is characterized by fat redistribution, menstrual irregularities, dysphoria, thin skin, moon facies, increased appetite, sleep disturbances, hypertension, hypercholesterolaemia, hypertriglyceridemia, glucose intolerance, abdominal striae and hirsutism,

Psychiatric manifestations of Cushing's syndrome include poor concentration, low mood,

impaired memory, euphoria. Depressive symptoms are seen in 50% of the cases and about half of these patients receiving a diagnosis of moderate or severe depression. A small percentage of patients may develop psychotic symptoms.[7]

Depression may be slow to remit, even after hypercortisolaemia is corrected. In such cases, active treatment for depression is required. Specific psychiatric treatment may be required, while waiting for Cushing's syndrome to resolve.

Case vignette 3: Prednisolone induced Cushing's syndrome with mania

Mr. P, 34 year old male, presented to psychiatry OPD with overcheerfulness, hyperactivity, and talking big and excessively for about two months. Further assessment revealed elated affect, increased psychomotor activity and delusions of grandiosity, impaired judgment and insight. Mr P had been using tablet dexamethasone 0.4mg upto 5-6 tablets per day with occasional use of i.v dexamethasone for about 8-10 years. There was a history of multiple episodes of sudden stoppage of dexamethasone leading to acute adrenal crisis requiring admission.

General physical examination showed abdominal obesity and purple striae on abdomen. On further investigations suppressed HPA axis, hypercholesterolemia and hypertriglyceridemia were found.

Important issues in the case were long term corticosteroid dependence, high degree of HPA axis suppression and Cushing's syndrome with dyslipidaemia, weight gain, non-alcoholic steatohepatitis, osteoporosis, and avascular necrosis of hip.

Mr A was investigated extensively after endocrinology consultation. Mania was managed with risperidone and predinsolone replacement was used with a gradual withdrawal over 6 months. He was referred to the concerned specialties for management of other associated physical comorbidities.

The following case vignette discusses a patient who developed Cushing's syndrome following long term use of prednisolone and later developed manic symptoms.

Addison's disease is usually a result of autoimmune process that destroys the adrenal glands. Both glucocorticoid and mineralo-corticoid secretion are diminished. The condition is usually fatal, if left untreated.

Clinical picture is characterized by weight loss, fatigue, vomiting, diarrhea, anorexia, and salt-craving. Patients may also complain of muscle and joint pain, abdominal pain, and postural dizziness. Lifelong replacement of both glucocorticoids and mineralocorticoids may be required. The patients may be misdiagnosed as major depressive disorder, personality disorder, dementia, or somatoform disorders.[8]

Prolactin

Prolactin is synthesized in the pituitary gland. Its secretion is increased during pregnancy, enhancing breast development. Oestrogen stimulates its secretion. The secretion is inhibited by glucocorticoids and thyroid hormone. Prolactin secretion is predominantly under the inhibitory control of dopamine.

Hyperprolactinemia is caused by dopamine blocking medications such as neuroleptics. Symptoms of hyperprolactinaemia include breast development, lactation, menstrual irregularities, amenorrhea and infertility.[9]

Case Vignette 4: Hyperprolactinemia

Mrs. S, a 45 year female presented with an illness of about 3 months characterized by fearfulness, suspiciousness, delusion of persecution, 2nd and 3rd person auditory hallucinations, psychomotor retardation, disturbance in sleep and poor oral intake. She also had drug induced EPS. She was also complaining of galactorrhoea for about a month. The illness had started following death of her mother. Mrs S also suffered from bilateral hearing loss for the last 15 years and amenorrhea for7 years. Investigations including haemogram, renal function, liver function, serum vitamin B-12 and folic acid, thyroid function, FSH and LH did not reveal any abnormality. Serum prolactin was raised.

MRI brain showed mild to moderate fronto-parietal, periventricular sub -cortical ischemic change due to small vessel disease. Dynamic CEMRI for pituitary gland showed left lobe pituitary micro adenoma (size 0.6 cm). Audiometry showed sensory neural deficit.

She was diagnosed as late onset psychosis with bilateral hearing loss. Sensory deprivation had probably led to auditory hallucination. There was poor response to various antipsychotics. It was not possible to point out the exact cause of hyperprolactinemia which could be drug induced or due to probable pituitary adenoma.

Mrs S was managed simultaneously by psychiatry and endocrinology departments. She was started on clozapine, which led to a steady fall in prolactin levels. This confirmed antipsychotics as the probable cause for hyperprolactinemia. It was planned to review after 6 months with a repeat MRI.

The following case vignette describes a case of hyperprolactinemia in which pituitary adenoma and antipsychotics were the probable causes.

Diabetes Inspidus

Diabetes inspidus is caused by insufficient secretion or action of the antidiuretic hormone (ADH). It can be of central (neurogenic) origin when there is failure of the posterior pituitary to secrete adequate ADH or peripheral, when the kidney fails to respond to ADH. The patient secretes large volumes of urine, causing polydipsia, and intracellular and extracellular dehydration.

Differential diagnosis includes compulsive water drinking or psychogenic polydipsia, in which patients drink at least 5 liters of water daily, which reduces ADH secretion and causes diuresis.

Water deprivation test is used to differentiate between the two. In water deprivation test, water is withheld for 12 to 18 hours. In compulsive water drinking, urine osmolarity becomes more than plasma osmolality, whereas in diabetes insipidus it remains low.

The following case vignette discusses management of a patient of psychogenic polydipsia.

Hypopituitarism

Hypopituitarism is caused by destruction of pituitary due to tumours, or vascular or traumatic causes or inadequate stimulation from hypothalamus. Clinical manifestations depend on the specific hormones which are deficient. Symptoms may include headache or visual loss.

Case Vignette 5: **Management of a patient of psychogenic polydipsia**

Mr. B, 46 yrs old, married male, presented to psychiatry OPD with complaints of excessive water consumption up to 20 litres/day and increased frequency of micturition for a duration of 20 years. The illness had an insidious onset with a continuous course. There were no symptoms of water intoxication or seizures. He also complained of persistent altered bowel movements, belching and bloating sensation. There was no past or family history of psychiatric illness. He had a well adjusted premorbid personality.

Physical examination did not reveal any significant abnormality. On mental status examination, except for somatic preoccupation about bowel movements, no other abnormality was found. X ray chest, ECG, and ultrasound for genitourinary system were normal. Sigmoidoscopy revealed normal mucosal pattern.

Investigations revealed hyponatremia (126 meq/L) and low urine specific gravity (1.005). 24 hour urine albumin, urine sodium and urine potassium were 0.01 gm, 15 meq/l and 3 meq/l respectively. 24 hrs urine electrolytes were lower than the normal range. Urine and serum osmolality were lower than the normal range. Water deprivation test showed increase in urine osmolality with restriction of fluid intake indicating it to be psychogenic polydipsia

A diagnosis of psychogenic polydipsia (psychogenic diabetes inspidus) was made. A record of 24 hour input output was maintained. Patient was asked to note his daily intake and output of liquids. He was advised to substitute a 1 liter bottle with 500 ml bottle for water intake which was shifted to use of glass of 250 ml. after 2 weeks. Relaxation exercises were used to control anxiety and sucking on lozenges was used to control thirst. He was counselled about his misperception about the gastrointestinal symptoms. The patient showed improvement over a period of 6 weeks and was discharged.

On radiography sella enlargement may be seen.

Phaeochromocytoma

Adrenal medulla synthesizes catecholamines, which is released in circulation. Increased activity of the adrenal medulla causes symptoms related to catecholamine excess. More than 90% of phaeochromocytomas arise from the adrenal medulla, commonly as a part of multiple endocrine neoplasia. Most phaeochromocytomas secrete predominantly noradrenaline.

Clinical picture of phaeochromocytoma is characterized by hypertension, flushing, anxiety, abdominal pain, and chest pain. The symptoms are often fluctuating.

Diagnosis is made by assessing urine for the elevated excretion of catecholamines and their metabolites (e.g. vanillylmandelic acid). Surgery is indicated, if the lesion is localizable and accessible.

Conclusion

There is a wide range of psychiatric comorbidity with endocrinal diseases. An active collaboration is required between the psychiatrists and endocrinologists. Psychoeducation of the patients remain an important component of management, especially to maintain treatment adherence. Choice of the psychotropics should take into consideration the associated physical parameters.

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Review article

Distress and Depression in Cancer

Santosh K. Chaturvedi

Abstract

Cancer, or simply the thought of cancer, may cause distress, which might result in depression. It increases with disease severity and symptoms such as pain and fatigue. Despite the high prevalence of depression in cancer patients, it often goes unrecognized and failure to detect and treat depression jeopardizes the outcomes of cancer therapies, decreases patients' quality of life, and increases health care costs. There is also evidence that providing psychosocial support reduces depression, anxiety, and pain, and may increase survival time with cancer. This article reviews the evaluation and management of distress and depression in cancer patients.

Key words: *distress, depression, cancer, oncology.*

Introduction

The role of psychosocial factors in cancer has been recognized as important since a long time by clinicians, however, active research and other activities have taken place only over the last two decades or so in our country. Oncologists have had little time besides coping with the therapeutic or curative aspects of the large number of cancer patients in their hospitals to think about psychosocial aspects. Psychological reactions to cancer are considered a 'natural phenomenon', and far 'less important' than the physical care. Moreover, cancer patients in India seek treatment when their disease is fairly advanced, so that the care of the physical condition is the major focus. Simultaneous, physical and emotional care or 'holistic care' is gradually becoming popular. Adequate psychosocial support for cancer is lacking in most places. In this presentation, two key aspects of psychiatric aspects of cancer will be discussed, namely, distress in cancer and depression and its management in cancer.

Distress in cancer

'Distress' in cancer is considered as the 'sixth vital sign', like 'pain' is considered as the 'fifth vital sign'. This implies that pain needs to be assessed in all medically ill persons, just like pulse, temperature, blood pressure and respiratory rate. Additionally, in persons with cancer and severe diseases, it is important to assess 'distress' as the sixth vital sign. The term "distress" was chosen by the International Psychooncology Society, because it is more acceptable and less stigmatizing than "psychiatric,""psychosocial," or "emotional". 'Distress' sounds "normal" and less embarrassing; further, it can be defined and measured by self-report.[1]

What is distress in cancer?

Distress is a multifactorial, unpleasant,

emotional experience of psychological (cognitive, behavioral, emotional), social, and/or spiritual nature, that may interfere with the ability to cope effectively with cancer, its physical symptoms and its treatment, which extends from a continuum from normal feelings of sadness, fear and vulnerability to disabling problems such as depression, anxiety, panic, social isolation and spiritual crisis.

Distress is in a continuum, from normal to severe, and can be marked on a visual analogue scale of a ten centimeter line. The 'distress thermometer' is used to assess psychological distress in cancer patients.

When can distress occur or what causes distress?

The distress in cancer patients can occur due to a number of factors. Many of these are manifest as concerns in the cancer patients. Concerns in cancer related to:

- Physical symptoms – pain, fatigue, vomiting, cachexia, and distressing symptoms,
- Psychological symptoms – fear, sadness, depression, anxiety, demoralization
- Social concerns – for family and their future, social stigma
- Spiritual concerns – seeking religious, philosophical and spiritual beliefs
- Existential concerns – seeking meaning and purpose of life and disease, and suffering

Patients at increased risk for distress:

Cancer patients with the following characteristics are prone to develop distress to a greater extent than others:

- History of psychiatric disorder/drug abuse
- History of depression/suicide attempt
- Cognitive impairment
- Communication barriers
- Severe comorbid medical illnesses
- Social problems
- Family/caregiver conflicts
- Inadequate social support
- Living alone
- Financial problems
- Limited access to medical care
- Young or dependent children
- Younger age; woman
- Other stressors

Periods of increased vulnerability for developing distress are many. It is not always at the time of diagnosis or during advanced stages or end of life. The distress can manifest right from the time the initial symptoms are detected to the end stages, like:

- Finding a suspicious symptom
- During workup
- Finding out the diagnosis
- Awaiting treatment
- Change in treatment modality
- End of treatment
- Discharge from hospital after treatment
- Stresses of survivorship
- Medical follow-up and surveillance
- Treatment failure
- Recurrence/progression
- Advanced cancer
- End of life

Prevalence of Distress in practice

Surveys have found that 20-40% of patients show a significant level of distress. However, less than 10% of patients are actually identified and referred for psychosocial help. The impact of unidentified distress can be varied. Failure to recognize and treat distress leads to several problems:

- Patients in distress may make extra visits to doctors and the hospital emergency department.
- Distressed patients have trouble making decisions about treatment and adhering

to treatment;
- Distressed patients become dissatisfied with their physicians and medical care.
- Management of the extremely distressed patient adds to the time demands as well as the stress on the busy oncologist.

Systematic screening may prove to be essential for the early evaluation and effective management of psychological distress in cancer patients. Psychosocial interventions have been shown to be effective in reducing distress and improving overall quality of life among cancer patients.

Commonly, distress is managed by family members by providing support and guidance. Many patients and their families seek help from religious places and figures to contain the distress. It is common to seek help from traditional healers also. There are few health professionals who systematically identify and manage distress. Health resources are few for such service. In cancer hospitals and institutions, distress in cancer is low priority '*don't ask, don't tell policy*' is what is routinely followed. Health professionals focus only on the physical aspects of the disease and its symptoms. They do not ask about distress due to the disease or any other related features, and there is no possibility of assessing or managing distress.

Management of distress

Distress should be detected, recognized, monitored, documented and treated promptly at all stages of the disease. All patients should be screened for distress at the initial visit. Screening should identify the level and nature of distress. Distress should be assessed and managed by evidence based and consensus based guidelines as provided by the International Psycho Oncology Society. The Goal should be that: No patient with distress should be unrecognized and untreated. The management of distress will vary from person to person, depending on the factors contributing to the distress.

Psychiatric disorders in cancer patients

The prevalence varies from 20 to 60% of cancer patients. The common psychiatric disorders are:
- Adjustment disorders
- Affective disorders - depression
- Sleep disorders
- Anticipatory nausea & vomiting
- Post traumatic stress disorder
- Body image problems
- Sexual dysfunction

The prevalence of psychiatric disorders in cancer patients in our study at Bangalore was 48%, the commonest being adjustment disorders in 44%.[2] [NIMHANS, HOSPICE, MANIPAL HOSPITAL STUDY, 2002, N=903].

In other studies,[3,4] psychiatric disorders was present in 53% . The common disorders were:
- Depressive disorders 22%
- Sleep disorders 15%
- Adjustment disorders 9%
- Mixed anxiety depression 6%
- Anxiety disorders 1%

Depression in cancer

Psychological and emotional reactions in cancer patients occur due to
- Knowledge of life threatening diagnosis
- Prognostic uncertainty
- Fears about death and dying
- Due to physical symptoms – Pain, nausea, lymphoedema, and other distressing symptoms
- Unwanted effects of medical, surgical and radiation treatments
- Stigma due to cancer and its consequences

The common coping mechanisms due to

cancer are well known. Different coping methods described in Western literature; in Indian settings the common coping mechanisms have been noted to be denial, resort into Religion, fate/ karma and helplessness. However, with these coping methods, resolution was noted in less than 40% of the frequent concerns. Poor resolution of concerns leads to distress and depression.[5]

Depression is the commonest manifestation of psychiatric disorder in cancer patients. Depression has a great impact on the cancer patient's psychological distress, quality of life, and increase in the subjective perception of pain, suicidal ideation and attempts, decreased adherence to treatment, prolonged length of hospital stay, increased family distress and worse prognosis.

Prevalence of depression in cancer

Depression occurs throughout the course of their illness. Studies on depression in cancer patients have revealed that 4.5 to 58% of patients experience some form of depression, including major depression, dysthymia, and adjustment disorders with depressive mood and that 1 to 38 % as having major depression.

Although depression is common and treatable, very few cancer patients receive beneficial psychosocial and psychiatric treatments. The barriers that interferes with appropriate treatment are; patient's reluctance to talk about psychological issues with medical staff, oncologist's thoughts that depression is understandable reaction to cancer, lack of oncologist's knowledge and skills about psychological assessment and management skills, lack of psychiatrist's knowledge about oncology, difficulties to distinguish from appropriate sadness to cancer and from depressive physical symptoms not attributable to cancer. Also, cultural, organizational and specific issues continue to represent a problem in the delivery of mental health interventions in medical settings.

Difficulty in diagnosing depression comes from somatic and vegetative symptoms, such as fatigue, appetite disturbance or weight loss, sleep difficulties, and difficulties with memory and concentration, because these symptoms are attributable to cancer and its treatment.[6] Hence one has to use symptom substitution or symptom reduction in the diagnostic criteria. More emphasis is placed on psychological symptoms, such as feelings of worthlessness, excessive guilt, hopelessness, and helplessness. Persistent suicidal ideation is strongly associated with major depression.

Risk factors for depression

The common risk factors for depression in cancer patients have been identified to be as follows:

- Organic mental disorders
- Poorly controlled physical symptoms
- Poor relationships and communication between staff and patient
- Past history of mood disorder
- Misuse of alcohol or drugs
- Concurrent life events or social difficulties
- Lack of support from family and friends
- Personality traits hindering adjustment - such as rigidity, pessimism, extreme need for independence and control

Under-recognition of depression in cancer

The reasons for under recognition of depression in cancer are similar to those as for under identification of distress in cancer. Patients are reluctant to voice their emotional complaints for fear of seeming weak or ungrateful; it is also due to stigma of being diagnosed as having a mental health problem. Professionals are reluctant to inquire about feelings and asking about depression, reportedly due to lack of time, and lack of skill [one may say it is a lack of will]. It is also due to emotional self protection and

attributing physical symptoms to physical [medical] illness, thus not considering an emotional problem. Lastly, patients, families and health professionals assume that emotional and psychological distress is inevitable and untreatable.

This is confirmed in a study, which found that awareness among cancer patients attending a cancer hospital, about diagnosis was in 54%, whereas the awareness about whether treatment is curative or palliative was reported by only 45%. There was no difference between the two groups in patterns and prevalence of psychiatric morbidity. However, more patients in the "unaware" group refused any treatment for psychological distress.[4]

Detection and Screening of depression in cancer

An appropriate scale for screening and detection of depression and anxiety in cancer patients would be one which has no physical or somatic symptom items. A study adapted the Hospital Anxiety and Depression Scale (HADS)[7] to test Indian cancer patients. A score for anxiety subscale of 7, had a sensitivity of 87% and specificity of 79% ; For Depression subscale a score of 8, had a sensitivity of 75% and specificity of 76% ; For total HADS scale scores, a score of 16 had a sensitivity of 85% and a specificity of 88%.[3]

Antidepressants in Cancer

Antidepressants are underused in cancer patients with psychological distress with a range of 1%-67%. Antidepressants relieve depression and anxiety, and correct sleep disturbances. Adverse drug reactions (ADRs) due to antidepressant were noted in 34%, which were intolerable in 17%. Antidepressants also help in treatment of somatization in cancer.[8,9] Controlled follow up study showed response of somatic symptoms in cancer to antidepressants.[10] All antidepressants are equally effective though side effects profiles differ.[11]

Principles of Psychological Management

There is a significant role of psychological management of depression in cancer patients. Some broad steps include

- Sensitive breaking of bad news[12]
- Providing information in accord with person's wishes
- Permitting expression of emotion
- Clarification of concerns and problems
- Encouraging confiding tie
- Involve patient in decisions about treatment
- Setting realistic goals
- Appropriate package of medical, psychological, spiritual and social care
- Effective communication skills
- Handling difficult questions – how long will I live, will I get well
- Handling treatment refusal
- Dealing with depression, anxiety
- Dealing with anger
- Dealing with 'why me'
- Spirituality issues
- Blocking behaviours of professionals

Effective communication skills can help provide ways for the above situations. A manual for such communication skills for Indian situation provides suitable guidelines.[13]

There are many ways of preventing and reducing depression through cancer treatments. These include helping patients and families make the choice between radical and conservative surgery, the use of prosthetic techniques and care of colostomies, if any. Reducing myths about radiotherapy and steps to reduce toxicity like, nausea, vomiting, alopecia and reduce financial burden and hospitalization through social support and providing pain relief and symptom control also can be helpful in preventing or reducing depression in cancer patients.

Depression, staff stress and burnout among physicians

While a lot of attention is given to depression and distress in cancer patients and their family members, there are also risks for development of staff stress and depression among cancer specialists.[14] These are due to

- Problems of communication and relationships
- Difficulty in taking conflicting decisions
- Breaking bad news
- Work overload
- Repeated confrontation with difficult & delicate situations
- Poor administrative support for social support,
- Decision making, work involvement
- Unrealistic objectives
- Admission of dying patients

Conclusion

Psychological distress in cancer is the *sixth vital sign*. Depression is common in cancer patients, and goes undetected and untreated. Current level of psychosocial support is inadequate but gradually improving, by volunteers, NGOs, & Survivors. Need to train trainers / teachers. Keep supportive services home based. To have locally relevant researches and measures to deal with distress in cancer patients. Need for services suitable for local needs, maintaining cultural and traditional factors, and economic realities.

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Review article

Consultation — liaison in paediatric population

Biswadip Chatterjee, Raman Deep Pattanayak, Rajesh Sagar

Abstract

Pediatric consultation-liaison services comprise of various kind of services provided by psychiatrists and other mental health professionals in paediatric clinics or paediatric wards. Several issues specific to pediatric population need more sensitive handling by a mental health professional with sufficient experience in child psychiatry. Children are at various levels of physical, cognitive and emotional development. Parents play an especially significant role in treatment, care as well as decision making process. This article will focus on the issues related to consultation- liaison services specifically in the paediatric settings.

Key words: *Consultation, Liaison, Paediatric population, Child psychiatry*

Introduction

In India, over one-third of the population is comprised of children up to 14 years of age.[1] While the prime concern, like most other developing countries, has been to decrease the mortality due to physical illness among this age group, there is a gradual shift of focus from treatment of medical problem to a more comprehensive management of the child which includes addressing the psychological and social issues in addition of medical morbidity. The general concept and principles of consultation-liaison psychiatry have been discussed elsewhere in this supplement; therefore, this article will focus on the consultation- liaison services (C-L) specifically in the paediatric population.

What is paediatric consultation-liaison service?

It is defined as all kind of services viz. consultation, liaison, diagnostic, therapeutic, support and research activities carried out by psychiatrists and other mental health professionals in paediatric clinics or on paediatric wards.[2] The biopsychosocial approach holds a higher importance among paediatric age group due to multiple reasons: (a) they are at various level of physical, cognitive and emotional development; (b) family plays a very important role both in their health and illness; and (c) their understanding about illnesses, coping mechanism and the extent of disability vary from adult population.[3]

Theoretical understanding

At least four components play a major role in the illness and care of pediatric population: (a) the child, (b) the illness, (c) the family, and (d) the environment. These factors interact amongst themselves and play a major role in the course and outcome of a medical illness, unlike in adult population where the interaction between

the factors may not be as strong as in children. Lask and Fosson[4] termed this mutual interaction as 'illness network'. All these factors in turn are affected by multiple variables which can affect the balance of the network and can become risk factors for psychological disturbance in this age group.[5] These include young age like infancy, presence of chronic illness as opposed to acute self-limiting illness, multiple hospital admissions, parents' attitude and reaction to the illness, and poor parent-child relationship. When a child is brought to treatment setting, another set of interaction starts which in turn affect the above network. This is between the patient (and family/ caregivers) and the treating team, which has been termed as 'operational groups' by Lipowsky.[6] Often the interaction is of trust and concern for the patient. However, in case of chronic illnesses and psychosomatic disorders there can be difference of opinion about management leading to feelings of mistrust, defeat or incompetence. This is more important in paediatric C-L setting because in this case the decision maker is often not the child and can result in resistance to psychiatric management. Keeping these issues in mind helps in understanding the expectation of the referring team, deciding the management strategy and at the same time ensures cooperation from both the treating team and the patient.

Need for pediatric liaison

The risk of psychiatric disorder in children with physical illnesses is approximately double compared to the healthy children.[7] The psychological problems may be seen in 20-35% of the attendees at the pediatric clinics. These may range from psychological issues like difficulty in adjustment to a life situation to a diagnosable psychiatric disorder. The rates of somatisation among those with psychological problems may vary between 75-90%.[8]

In a survey of paediatric clinics of 14 countries by WHO[9], the worldwide prevalence of medically unexplained symptoms was found to be 19.7%. Similar prevalence has been reported in Indian studies.[10] Stress and anxiety is the most common underlying problem in medically unexplained symptoms, however parents often fail to identify them and seek multiple consultations. In a study by Perera et al [11] in a paediatric setting, 51% of all the patients with medically unexplained symptoms had identifiable stressor and anxiety, but only 4% parents were able to identify the stressor. In another prevalence survey[12] of the representative sample attending paediatric out-patient, 20% of the children were found to have emotional and behavioural problems and out of them, only a quarter received chid mental health services. Further, paediatricians were able to identify these problems in only one-fourths of the cases identified by the parents. Thus, the rate of diagnosis of psychological problems by paediatricians appears to be low. A close collaborative work between paediatric mental health professional and paediatrician can bring about significant improvement in mental health care seeking.

Indian studies

In India, there is lack of studies on paediatric C-L services and its utilization. Various studies have reported paediatric referral rates to range from 7.5-8.6%.[13,14] Further Awasthi et al[13] reported that among all the paediatric referrals, 30% had no psychiatric illness, whereas in another 30% some psychological problem was present but no specific psychiatric diagnosis was made. Among those with psychiatric diagnosis, 'hysteria'(17.5%) was the most common diagnosis.

Impact of paediatric C-L services

The impact of establishing a formal paediatric psychiatric liaison service has been studied. It was found that there is a 66% increase

in total number of referrals, three times increase in referral of non-organic physical problems, increase in frequency of discussion on psychosocial issues related to cases, faster response and resolution of urgent cases and increase in joint case discussion and joint academic and research activities.[15] Another study by Carter et al [16] reported a high level of satisfaction with C-L services among the referring paediatrician and the patients' family members. In a survey of 144 paediatric C-L services [17] for knowing the nature of services availed, it was found that clinical service was the most common reason for referral (66%), whereas staff teaching and research activities constituted only 20% of requests. In most of the programmes, the most common barrier to liaisoning was lack of funding and staff; in fact, the funding was provided by the psychiatry department in 42%. [17]

Common referrals to a C-L psychiatrist

The common reasons for referral of child patients are:

1. Evaluation of unexplained physical symptoms (e.g. unexplained headaches, recurrent abdominal and other pains), which may be linked to psychological causes
2. Exacerbation of an underlying physical illness due to psychological causation
3. Management of psychosocial issues in children diagnosed with serious medical illnesses (e.g. leukaemia)
4. Children with a recent trauma and disaster
5. Suspected child abuse
6. Non-compliance or refusal of medication for chronic illness (e.g. juvenile-onset diabetes)
7. Patient with physical mental disability e.g. cerebral palsy with mental retardation
8. Management of behavioural problems associated with neurological illnesses e.g. meningo-encephalitis

The most common reasons for seeking C-L psychiatry referral are externalising behaviours, medically unexplained symptoms, maladjustment to chronic illnesses, bed wetting, psychosomatic problem and adjustment issues.[16-18]

Without a paediatric liaison service, many of the medically ill patients with psychological mental or behavioural disorders may never get in contact with psychiatric services, only to reappear later as adolescents or adults with mental health problems. Availability of a pediatric liasion is likely to facilitate the early identification and timely management of such cases.

Paediatric liaisoning – what is expected of C-L psychiatrist?

The psychiatrist may be consulted mostly for assistance in diagnosis and management of patients with concomitant psychological problems. In addition, many a times the psychiatrist may act as a mediator between the two groups – the patient group consisting of patient and his family and the paediatric treating team. This involves breaking of a bad news to the family, grief counselling or psychoeducation of the family. Sometimes, it also involves managing conflict between the two groups.

Factors that determine the type of service – (1) level of need; (2) type of service and level of involvement expected; (3) resources available for the service; and (4) the kind of setting – general paediatric wards, intensive care unit, out-patient, surgical or long admission wards.

General considerations

Whatever be the level of liaison service and age group, a few general considerations should always be remembered.[19] A biopsychosocial approach should be followed for all the patients. Regular and effective communication between

the pediatric and psychiatric team of professionals is essential. Wherever possible, team should be multidiscliplinary. The team should assess the child for psychological, social, cognitive, economic, and family factors and quality of life, especially in dealing with chronic illnesses e.g. juvenile rheumatoid arthritis or early onset diabetes. Adequate psychological preparation of the paediatric patient and family before hospitalization, surgery and major diagnostic procedure helps in decreasing traumatic experiences. Liaisoning should, ideally, occur at all levels- including out-patient clinics and community- in order to ensure continuity of care after discharge.

Specific considerations for paediatric C-L services:

There are several considerations to be kept in mind at the time of delivering the consultation-liaison services in a pediatric setting.[18,19]

- *Consideration for the developmental perspective*: Paediatric age-group is a special group from developmental perspective – both physically and emotionally. They cannot be considered as mini-adults. Their response to stress and coping mechanism are based on their perception of illness and the level of their cognitive and emotional development which are different from adults. Thus, assessment and management needs consideration of the developmental stage of the child. Similarly, care has to be taken on how to explain about a medical procedure to a child depending on his/ her developmental stage e.g. role play is more suitable, instead of a detailed explanation, for intravenous therapy in case of very young children.
- *Involvement of parents*: Parents are the main caregivers, chief interlocutors and decision makers on behalf of minor children and, therefore, they play a significant role in influencing the attitude of child towards illness and treatment. Sometimes, they may also be the cause of the illness manifestations in the child e.g. psychosomatic symptoms in a child with frequent family conflicts.
- *Assess the impact on child's siblings*: The illness of a child not only affects the child but also his siblings. Often parents devote more time and resources on the care of the care of ill child, especially in chronic medical and psychosomatic illnesses. This results in frequent and long separations from other children, disturbance of daily routine; which in turn affects all the other components of the "network" by increasing distress in the child, parents and even increasing sibling rivalry. [20]
- *Role of hospital environment* – The hospital is often a new environment for the sick child which deprives the child of familiar environment, siblings, friends and at the same time, exposes him/her to several new and potentially frightful experiences e.g injections. The nature of reaction of a child often depends on the age, the length of separation from home and prior experience with hospitalization, the child's temperament, reaction of the parents, and mainly on the information and preparation given to the child. Separation from parents, especially mother, often results in depression, withdrawn behaviour and increasing vulnerability to physical illness which Rene Spitz described as 'anaclitic depression' or 'hospitalism'. At times, the hospitalization may offer positive experience by creating new and different relationships. The nature of reaction can be largely influenced by

adequate information and preparation of the patient during admission.

- *Composition of pediatric C-L team*: The essential components of the team should include a psychiatrist with training or sufficient experience in child psychiatric issues, child psychologist, child and family psychotherapist and preferably a social worker and a child mental health nurse. The actual composition can vary depending upon the resource available and the number of referrals.
- *Relationship with the paediatric team*: As the child health service is a small community, the team should keep a close partnership and work in tandem with the paediatric team. Thus, the aim should be to not only provide clinical service, but also form a partnership between groups of colleagues. This will eventually influence the practice of paediatrics as well as of child and adolescent mental health. It also helps in removing stigma and prejudice against psychiatry, as the paediatric team gets sensitized to psychosocial issues and its management. Understanding the perceived need of the paediatric team and providing effective, readily available service is important.
- *Child protection for abuse/neglect*: Separate meetings with broader involvement of service providers like social workers and local authorities need to be involvement in ensuring the best possible psychological and physical care of actual or suspected child abuse. This is more important when the perpetrator of the abuse is a family member of the child.

Often the length of admission is determined by the referring team which may not be adequate for the C-L team to do comprehensive management of the various familial issues. Therefore, a smooth transition from the in-patient treatment to out-patient following discharge should be ensured.

Models of paediatric consultation[21]

1. Emergency response model – To met the urgent demands like in emergency room and ICUs
2. Anticipatory model – for pre-assessment and pre-treatment like prior to a major procedure, breaking of a bad news, etc. This is mostly applicable in paediatric surgery units, cancer therapy etc.
3. Case finding model – consists of an early identification and treatment of the children and families which would benefit from psychological intervention. Mostly applicable in general ward and out-patient settings.
4. Education and training model – where the role of consultation psychiatrist is confined to giving opinion at joint clinical conferences, joint rounds and discussions.
5. Continuity and collaborative care model – when there is continuous and concurrent paediatric and psychiatric treatment. True liaisoning occurs in this type of model. This is often found in chronic and long-standing illnesses like diabetes, cystic fibrosis, genetic disorders and paediatric oncology.

All the above models, like in general C-L psychiatry models, mostly differ with regards to the level of independence of the liaisoning psychiatric team and responsibility of the patients.

Barriers to liaison between paediatrician and child psychiatrist

There can be several barriers to effective

functioning of the pediatric C-L services.[18, 22] The delays in responding to a consultation or mismatch of the timings may deter a future referral. The approach to patient - directive approach of paediatrician versus persuasive approach of child psychiatrist - may at times create a conflict amongst professionals. This difference in approach is in form of body versus mind, life-threatening aspects versus quality of life, cure versus care, and so forth. There should be mutual understanding and respect about these issues, instead of having inappropriate expectations, hierarchy and status issues. Close communication in the form of routine meetings and clinical conferences and understanding the way of work is the key to remove this barrier. Attitude of the patient and families may pose an important barrier in paediatric liaison as family plays a much more prominent role in decision-making in case of a child. The dichotomous view of mind and body, the fact that they brought their child for 'physical' problems, and the stigma attached to psychiatric illness often brings resistance and reluctance to the treatment offered. This may be resolved to a certain extent by prior 'conditioning' of the parents by the paediatrician, involving the liaison team early in treatment course instead of seeking a delayed consultation when the medical examinations fail to reveal any result. The liaison team should also hold combined sessions with the patient and caregivers to explain the nature and cause of illness.

Conclusion

The risk of psychiatric disorder in children with physical illnesses is approximately double compared to the healthy children. Several psychological, familial and social issues may need attention, especially in case of chronic illnesses. Children are often at varying stages of cognitive and emotional development, which needs to be considered during assessment and management. Family factors attain a greater significance from an etiological and management perspective in case of children. Consultation and Liaison services geared towards pediatric population are likely to facilitate the early identification and management of mental morbidity in the younger population.

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Review article

Consultation-liaison psychiatry: Psychopharmacology Dos & Dont's

Siddarath Sarkar, Natasha Kate, Sandeep Grover

Abstract

Psychiatric disorders are more common in medically ill patients when compared to general population. Psychotropic medications are often prescribed to medically ill patients to ameliorate the psychiatric symptoms. These medications are likely to impact medical illnesses or interact with medications being prescribed for the treatment of medical illness. Rational clinical practice warrants cautious use of psychotropic agents by taking into consideration the severity of medical illness, severity of psychiatric disorder, medication which the patient is already receiving and the physiological reserve of various organ systems. A patient centred approach must be followed. This article looks into the dos and don'ts of using pharmacological agents while treating psychiatric disorders in the medically ill.

Keywords: *medically ill, psychiatric morbidity, psychopharmacology, drug interactions*

Introduction

It is a well known fact that in general psychiatric disorders are more common in medically ill patients as compared to the general population.[1,2] The prevalence figures for psychiatric disorders in patients with different medical illnesses has been reported to vary from 10-80% depending on the treatment setting (inpatient vs outpatient), severity of medical illness, type of medical illness (example certain types of cancers, diabetes mellitus, coronary artery disease patients), and age of the patients (elderly are more prone to develop delirium).[3–8] The psychiatric morbidity in medically ill patients varies from adverse psychological reaction (amounting to acute stress reaction or adjustment disorder) to severe mental disorders occurring as comorbid illnesses. Further, certain psychiatric disorders are largely confined to medically ill population (example, delirium).[9] It has also been consistently shown that comorbid psychiatric disorders in medically ill patients increase the mortality and morbidity.[10,11] Further, comorbid psychiatric disorders are associated with poor treatment compliance for the physical illness.[12] Hence, it is important to properly treat the psychiatric disorders in medically ill patients.

Studies from the West suggest that about a third of psychiatric consultations for medically ill include recommendation for a psychotropic medication.[13] Prescribing psychotropic agents in medically ill patients is a challenge as the psychiatrist is not only expected to use drugs which are effective, but is also expected to treat

the psychiatric morbidity without worsening the underlying physical disorder, use drugs which have minimum or no drug interactions with the existing regimen and do not lead to side effects very similar to that of the continuing regimen. Hence, it is important to understand the "dos and don'ts" of using psychopharmacological agents in treating psychiatric disorders in medically ill patients.

Basic Principles to remember

It must be remembered that treatment guidelines formulated for management of various psychiatric disorders[14,15] cannot be directly applied for treating psychiatric disorders in patients with medical illnesses. This is because most of the drugs trials reporting efficacy and side effect profile of psychotropics exclude the patients with medical illnesses, those having comorbid substance abuse or those taking concomitant medications.[16,17] The trials also exclude elderly and children who more frequently have comorbid physical and psychiatric problems.[18] Thus, the recommendations from guidelines need to be interpreted after considering the patient's medical status, and being aware of possible drug interactions. To improve the clinical practice, alternate guidelines have been formulated for management of psychiatric disorders in medically ill.[19] Whenever such guidelines are available, the clinicians should try to use the same to make day to day clinical decisions.

Many factors make the medically ill patients more vulnerable to adverse events of psychotropic medications. These patients are more likely to have decreased body reserves in terms of liver function, kidney function, pulmonary function etc. The illness characteristics determine the type and extent of organ systems likely to be affected. Many of these patients are elderly and there is a decrement of bodily functions with age.[20,21] For example, with age renal clearance decreases and hepatocyte function may be altered. Moreover, medically ill are likely to be on other medications, and at times on a combination of medications.[22,23] This increases the likelihood of having a pharmacokinetic or pharamacodynamic interaction between the drugs. The situation may be complicated by substance abuse and self medication by the patients, which may adversely affect the impact of psychotropic medication.[24–26]

Psychotropic medications also can cause further impairment in the medical condition through various mechanisms. These medications can cause QTc prolongation, which can seriously impair cardiac functioning in those with heart block or congestive heart failure. Some drugs like olanzapine and clozapine may worsen diabetes mellitus by exacerbating insulin resistance and increasing blood sugar levels.[27,28] Many psychotropic agents are potentially hepatotoxic and can lead to worsening of hepatic insufficiency. Drugs like benzodiazepines and barbiturates can cause respiratory depression and adversely impact pulmonary conditions.[29] Medications like selective serotonin reuptake inhibitors (SSRIs) may cause increased risk of bleeding, a concern especially in those undergoing surgery or receiving anticoagulants like heparin. Many antidepressants and antipsychotics are associated with electrolyte imbalances especially hyponatremia in the elderly.[30,31]

Given varied effects of psychopharmacological agents, it is worthwhile to have a better understanding about the different aspects of these drugs while prescribing them in medically ill patients. The general principles to be followed while choosing a psychopharmacological agent are shown in Tables 1 and 2.

The Dos in psychopharmacology in Consultation-Liaison Psychiatry

The psychiatrist in the consultation-liaison setup should be guided by the principle of

Table-1: Basic principles to remember

- Treatment guidelines formulation for various psychiatric disorders cannot be generalised to medically ill patients
- Medically ill patients have decreased body reserve, which make them more prone to adverse effects of psychotropics
- Psychotropic medications can complicate the medical illness and lead to further impairment of physical health status

Table 2: Using psychopharmacological agents

- Have a better understanding about the efficacy and safety of the agent to be used in a particular condition
- Pharmacokinetics
- Pharmacodynamics
- Drug interactions
- Contraindications

beneficence, wherein his/her aim should always be to act in the best interests of the patient. This involves a thorough assessment of the patient's problems, needs and resources, as well as a dialogue with the treating physician and the caregivers.

Consent of patient and the caregiver

Consultation-liaison psychiatrists have to often assess patients that are admitted in various medical and surgical speciality wards. Patients admitted in the medical surgical setting and their caregivers may often be taken by surprise when approached by a psychiatrist, and given the stigma towards mental illness, may also take offence on being evaluated by a psychiatrist. It is ideally the duty of the physician who refers the patient for psychiatric evaluation, to explain to the patient and the caregiver, the need for a psychiatric examination. Nevertheless, as a part of medical ethics, when the psychiatrist first approaches the patient, he/she should take the consent of the patient/caregiver for the evaluation of his/her or of his relative's psychological symptoms and respect the autonomy to allow or reject psychiatric evaluation and management.

Assessments

Prior to prescribing a psychopharmacological agent, a thorough assessment is must. Before considering a psychiatric disorder and planning to start psychotropic medications, it is better to have an in-depth understanding of the cause of the manifest symptoms.[32] Whether the cause of the symptoms is functional or organic needs to be teased out. Sometimes, constellations of symptoms are induced by reversible causes, for example, delirium due to hyponatremia. At other times, symptoms could be due to medications being used for treatment of underlying physical illness, for example, steroid induced psychosis. These scenarios may not require use of psychotropic agents as the first line treatment, as just correcting the underlying electrolyte imbalance or withdrawal or steroids may be sufficient to take care of psychiatric symptoms.

Thorough assessment involves taking history of physical illness, and taking history of psychiatric symptoms especially focusing on temporal relationship of onset of psychiatric symptoms with onset of physical illness or worsening of symptoms of physical illness. It is very important to focus on evaluating any kind of impairment involving the hepatic, renal, cardiac-vascular and neurological systems[33], because most of the psychotropics are metabolized through the liver, are eliminated by the kidneys, and can lead to severe cardiac and neurological side effects. As many psychotropics reduce seizure threshold, history of epilepsy should be ascertained. Other illnesses like diabetes mellitus, hypertension, obesity, brain insult, Parkinson's disease, glaucoma, lung diseases, acid peptic disease, mal-absorption

syndromes, constipation, sexual dysfunction, etc should be screened as effects of psychotropics may be altered and side effects accentuated in the presence of these conditions.

History of the evolution and course of the psychiatric symptoms should be noted and mental status examination should be conducted with sensitivity to the limitations imposed by the medical illness and the treatment setting. While evaluating psychiatric symptoms, the assessment should also focus on assessing the severity of psychiatric morbidity and its impact on the treatment and outcome of underlying medical illness. This is very important because, many a times in the face of milder psychiatric illness, the *'cons'* of using a psychopharmacological agent may be more than the *'pros'* of using the same. Additionally, substance use history should be evaluated, as many of the substances have synergistic actions with psychotropic agents and smoking can have significant impact on the metabolism of many of the psychotropic agents.

A review of the patient's investigations should be done including that of haemogram (encompassing platelet count, bleeding time, clotting time), liver function tests, renal function tests, serum electrolytes especially serum sodium and potassium, blood sugar levels, electro-cardiogram and arterial blood gases. Specialized tests should be documented if they had been undertaken, for example, magnetic resonance imaging (MRI) of the brain. When not available and the need is felt, specific investigations need to be done before prescribing psychotropic agents.

After taking a good history it is important to review the treatment record to check the medications which the patient is already receiving.[33] A common mistake is forgetting to ask the patient and the caregiver about use of over the counter medications, many of which either cause psychiatric symptoms or interact with psychotropic agents.

A through physical examination should be conducted to record baseline recording of blood pressure, postural falls, pulse rate, body weight, body mass index, and relevant systemic examinations.

Another most important aspect to remember before prescribing in consultation-liaison setting is having a dialogue with the primary treating physicians/surgeon focusing on what their expectations are, what is thought about psychiatric symptoms (organic vs functional, less severe vs more severe), explaining the risk (for example letting them know if the patient has suicidality), what is expected from them (as to how they should interact with patient), what is to be done in emergency situations, and how to monitor to psychotropic agents (as to when to use on PRN basis, when to increase the dose etc). Enquiry should be made about the possibility of stopping certain medications, reducing the dose, or changing to some other medication.

Last but not the least everything should be documented clearly so that the notes act as guide for further reference and monitoring.

Table-3: Do's before prescribing psychopharmacological agents in medically ill patients

1. Detailed history about the physical illness
2. Detailed history focusing on presence of if any impairment involving the hepatic, renal, cardiac-vascular and neurological systems
3. Detail history about the relationship of psychiatric symptoms with physical illness, medications given and investigation findings
4. Take a proper history for substance abuse/dependence
5. Thorough physical examination to record baseline physical parameters
6. Review the investigation chart
7. Review the treatment records for prescription medications, ask for use of over the counter medications
8. Discuss with the primary treating physicians/surgeon
9. Document all findings, opinions and discussions in details

Be knowledgeable about drug interactions

It is important to have basic knowledge about possible drug interactions of psychotropic agents, with medications used for treatment of physical illnesses, besides having knowledge about drug interactions between different psychotropic medications.

Some of the drugs which are prone to cause drug interactions with psychotropic agents are anabolic steroids, Angiotensin converting-enzyme (ACE) inhibitors, anticholingergics, atropine, antiepileptics, barbiturates, benzodiazepines, beta-adrenergic blockers, calcium-channel blockers, cephalosporins, corticosteroids, dopamine receptor agonists, estrogens, fluoroquinolone antibiotics, Histaminic blockers, Non Steroidal Anti Inflammatory Drugs (NSAIDS), opioids, salicylates, sulfonamides, and thiazide diuretics etc.[34,35] Review the patient's medication chart. As discussed earlier, also ask for use of over the counter (OTC) medications, nutritional supplements, ayurvedic and 'desi' preparations, and herbal preparations (Ginkgo biloba, Ginseng, Kava Kava) as these too interact with psychotropics.[36,37]

The drug interactions with psychotropics can be pharmacodynamic or pharmacokinetic.[38] Pharmacodynamic interactions involve alterations in the pharmacological response to a drug, which may be additive, synergistic or antagonistic. Pharmacokinetic interactions include alteration in absorption, distribution, metabolism, or excretion of the drug. The Cytochrome P450 (CYP450) system is one of the most important pathways in the metabolism of psychotropics.[39] Though 11 families of CYP450 enzyme system have been described, the important ones in humans include CYP1A2, CYP2 (CYP2C9, CYP2C19, CYP2D6) and CYP3A4. The CYP system is present primarily in gastrointestinal tract, liver, and brain. Each of the enzyme systems has specific substrates, inhibitors and inducers. A basic list of the same is shown in table-4. It is not necessary that all the drugs which are substrates, inhibitors or inducers of a particular CYP450 system will always interact. To have clinically significant drug interaction at the CYP450 level, the drug must be eliminated through only one of the CYP enzyme. For example, nifedipine is metabolized through CYP3A4 only and when fluvoxamine (a CYP3A4 inhibitor) is used, levels of nifedipine raise and leading to toxicity. When nifedipine is used with escitalopram (which is metabolized by other CYP enzymes also), changes in nifedipine levels are not observed.

While prescribing, it is a good idea to have a 'ready recknor' of list of drugs which are inducers, inhibitors and substrates of CYP450 system. Many online 'drug interaction'

Table-4: CYP450 enzyme system: psychotropic substrates, inhibitors and inducers

Enzymes and effect of aging	Substrates	Inhibitors	Inducers
CYP1A2	Amitriptyline, clozapine, olanzapine, haloperidol	Fluvoxamine	Carbamazepine, barbiturates
CYP3A4 ↓ with age	Clozapine, quetiapine, risperidone, ziprasidone, diazepam, sertaline, mirtazapine, alprazolam, zolpidem, amitriptyline	Fluvoxamine, antifungals	Carbamazepine, barbiturates, oxcarbazepine, topiramate
CYP2D6 No effect of age	Nortiptyline, desimipramine, paroxetine, venlafaxine, risperidone	Fluoxetine, paroxetine	—
CYP2C19 ↓ with age	Diazepam, Escitalopram, warfarin, Amitriptyline, imipramine	Fluoxetine, fluvoxamine	—

calculators are available, which can help in instantaneous decision. The basic principle to be followed is to avoid medications that significantly inhibit or induce cytochrome P450 enzymes and prefer those that are eliminated by multiple pathways and have a wide safety margin.

Focus on electrocardiogram

Many psychotropics can prolong QTc interval resulting in cardiac arrest and arrhythmias.[40] The psychotropics commonly associated with prolongation of QTc are tricyclic antidepressants (TCAs), thioridazine, droperidol, ziprasidone, and olanzapine. Other drugs commonly associated with QTc prolongation which can have additive effects include antiarrhythmics, antihistamines, prokinetics, muscle relaxants (like alcuronium, pancuronium and atracurium), opioids, chemotherapeutic agents (like anthracyclines, alkylating drugs, alkilants and cisplatin), and antiemetics (like granisetron, ondansetron, and dolasetron).[41] Hence, having an electrocardiogram prior to initiating a psychotropic agent is a safe strategy. Further it is also important to remember that few of the psychotropic agents (for example escitalopram, lithium) can lead to bradycardia, which can be fatal in vulnerable patients.[42,43]

Proper evaluation of liver and kidney reserve

Attention need to be paid to the level of functioning of Liver and kidney. Hepatic dysfunction evidenced by rising aspartate and alanine transaminases (AST/ALT) and bilirubin levels require avoidance of drugs metabolized exclusively by the liver. Similarly, renal impairment suggested by diminished creatinine clearance necessitates avoidance of drugs excreted by the kidneys.

The preferred medications in presence of severe liver disease include amisulpiride among the antipsychotics.[44] Chlorpromazine should be avoided. Lorazepam and oxazepam are the benzodiazepines that can be safely prescribed in presence of severe liver diseases as these are not metabolized by the liver. Lithium and gabapentin should be preferred mood stabilizers while carbamazepine and valproate should be avoided. Selective serotonin reuptake inhibitors and milnacipran could be used in patients with liver disease with some caution while tricyclic antidepressants (TCAs) and nefazodone should be avoided.[45]

In the face of severe renal disease, olanzapine or quetiapine may be preferred as the antipsychotic agents to be used while amisulpiride should be avoided.[46] Lithium and gabapentin should be avoided among the mood stabilizers while valproate or carbamazepine may be used safely. Among the antidepressants, citalopram and fluoxetine can be given while venlafaxine, TCAs and paroxetine should be avoided.

Psychotropics and surgery

A consultation-liaison psychiatrist is quite frequently contacted for an opinion as to continue or discontinue psychotropic medications prior to surgery.[47] Psychotropic use can lead to complications during surgery (for example, excess bleeding with SSRI), and may interact with the anaesthetic agents. Risk of bleeding increases on combining SSRIs with NSAIDs.[48,49] Post operatively, due to multiple factors, a patient may become delirious and need antipsychotics or benzodiazepines.

In surgical patients, SSRIs should be discontinued if the patient has severe systemic disorder, is elderly, and is likely to receive drugs like opioid, and sympathomimetics. Lithium and clozapine should be stopped and restarted as soon as the patient is hemodynamically stable and is allowed oral fluids.[50]

Decision to start psychotropic agent

Before considering the use of a psychotropic agent, the psychiatrist should consider whether the patient can be managed without medications or not. Other important considerations are listed in Table-5. On the other hand, equal consideration should be given to the risk to the life of the patients if psychotropics are withheld. Sometimes patient may be having severe depression along with suicidal ideations. In such situation, avoidance of antidepressants may be dangerous to the life of the patient. Prior to starting a psychotropic agent, review previous use of any psychotropic agent for effectiveness, side effects encountered, doses tolerated, and the concomitant medications which were used along with the psychotropic agent.

Finally, if the decision has been made to start a drug from a particular category, let's say antidepressants, selection of particular antidepressant should take into account the physical illness, efficacy, side effects, and drug interactions in a particular case.

Table-5: Factors to be taken into account while starting psychotropics in a medically ill

- Whether the patient can be managed without medications?
- Is there a risk to the life of the patient if a psychotropic agent is withheld?
- From a particular category of drugs, which best suits the current situation (taking into account the physical illness, efficacy, side effects, and drug interactions)?
- For how long the psychotropic is intended to be used?

If patient is already on psychotropics, does it need to be continued?

How to start and what formulation to use

In medically ill patients, the golden rule of 'start low and go slow' should be followed.[51] The starting dose could be half the normal starting dose (one fourth of the normal starting dose in elderly and children). One should be aware of alternative routes of administration for various drugs and formulations available. The parenteral routes include sublingual, intravenous, intramuscular, intranasal, rectal, and transdermal. Using these routes bypasses first-pass hepatic metabolism, leading to greater bioavailability. Sometimes, due to the medical condition, or in pre or post operative states, the patients are not able to take medications orally. Therein, the other routes can be utilized to deliver medications.

A clear discussion should be done with the physician about starting the medications, and their queries and concerns (if any) should be addressed.[52] If needed, possibility of stopping certain medications, reducing the dose, or changing to some other medication, should be explored. Drug interaction calculators may be of benefit while assessing impact of one drug on another.[53]

Talk to patient and family

Clear instruction to the patient and family members should also be given with regard to when to take the medications, when and how to increase the dose, when to stop the medications (for example, if patient becomes confused), and what to take and what not to take (water intake, alcohol, smoking, dietary pattern, over the counter medications, herbal preparations etc).

Use of psychotherapeutic intervention can be added to augment the effects of psychotropic medication. Talking to the patient and the family, psychoeducating about the illness, instituting supportive or cognitive psychotherapy, use of reorientation cues and life style modifications can also help in dealing with the psychiatric illness.

Follow-up

Close follow-up of the patients should be undertaken. Repeat investigations should be done

before increasing the dose, for example, repeat serum electrolytes before increasing the dose of SSRIs in elderly patient. Stopping of medications should be considered whenever possible, for example, expedient discontinuation of antipsychotics if the delirium has resolved.[54]

The don'ts in psychopharmacology in Consultation-Liaison Psychiatry

Here, the principle of non-maleficence should be keenly observed. The concept of non-maleficence is embodied by the phrase, "*primum non nocere*" which is Latin for "first, do no harm". This is important as an inexperienced or over enthusiastic psychiatrist may prescribe treatments under the sole consideration of their benefit while in reality, the potential benefits of the treatment may be overshadowed by its harmful effects.

Some of the caveats to be borne in mind while using psychotropic medications in medically ill patients include avoiding drug interactions wherever possible. Avoid combinations of SSRIs or TCAs & CYP 450 inhibitors (Quinidine, Ketoconazole, Itraconazole, Erythromycin, Clarithromycin, and Nefazodone). Similarly, avoid combination of antidepressants with drugs having high plasma protein binding (SSRIs can displace warfarin from plasma protein binding sites; quinidine can reduce the metabolism of SSRIs). It is important to avoid use of serotonoergic drugs with sumatriptan, ritonavir, and tramadol (risk of serotonin syndrome). Similarly, use of combination of SSRIs and loop diuretics (hyponatremia) must be avoided.

Care must be exercised while using benzodiazepines. It is better to avoid benzodiazepines in those with risk of falls and those with cognitive disturbances.[55,56] Pre-existing respiratory disorders (such as COPD), and sleep apnea would also warrant cautious use of benzodiazepines, due to it's potential of causing respiratory depression. Casual use of benzodiazepines should be avoided, and it should be used for minimum possible duration.[57]

Selection of psychotropics with potential hematological side effects (example clozapine, mirtazapine, valproate, carbamazepine, SSRI) must be made with caution in patients prone to have haematological problems.[58] These include patients on chemotherapeutic agents, patients with altered hematological profile, patients with active bleeding, and those with inherited disorders of blood coagulation.

Polypharmacy, i.e. use of more than one drug from the same class should be avoided whenever possible. When clinical condition so requires, attempts should be made to prevent over medication of the patient.[59] Using two drugs of the same class may compound the side effects without much additional therapeutic benefits.

It is important to pay attention if patient reports unusual side effects after starting of psychotropics which are not generally seen. The medical condition may predispose the patient to have 'non-classic' side effects. Hence, all the rare side effects reported must be taken seriously and further decisions should be taken accordingly depending on the tolerability.

Additionally, it is also important not to under treat the psychiatric morbidity. Adequate and appropriate treatment of the psychiatric problems can reduce distress and improve the functioning of the medically ill patient.

Table 6: Don't in psychopharmacology in Consultation liaison Psychiatry

• Avoid drug interactions
• Avoid casual use of benzodiazepines
• Don't ignore the hematological status
• Avoid polypharmacy
• Don't ignore the side effects reported
• Don't under treat psychiatric disorder

Don't just prescribe- do discuss with physician, patient and family.

Conclusions

Many of the medically ill patients seen in consultation-liaison services require pharmacological management. Due to compromised bodily functions, these patients are at higher risk of adverse events. Cautious use of psychopharmacological agents, paying due consideration to their side effects and drug interactions is warranted. The treating team, patient and the family members need to be informed about the use of psychopharmacological agents in an appropriate manner. Rational use of psychopharmacological medications can alleviate distress, improve functioning and improve patient's co-operation with the treatment of both disorders.

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Case discussion

Delirium in respiratory intensive care unit

Naresh Nebhinani, **Hitesh Khurana**

Case vignette

Mr. X, 55 year old male is a diagnosed case of chronic obstructive pulmonary disease for last 10 years and had become oxygen dependent for last 2 years. He was also a chronic cigarette smoker for past 30 years. He presented to accident and emergency department in acute confusional state. He was not recognizing his family members and was perplexed. On examination, he was cyanosed, having difficulty in breathing and subsequently admitted in respiratory intensive care unit. Treating team sent a psychiatric referral because patient was not cooperative, shouting and thus disturbing the whole unit. On psychiatric examination, he was not answering examiner's questions but would rather "parrot" the examiner's words back. He was perplexed, picking up clothes and pulling out tubings. Sometime he was quiet in the bed while at other times he was trying to get up from bed and appeared restless. His family members told that his behaviour was more disturbed during night hours. They also revealed that he was sleeping less than before for last 1 week due to daughter's marriage. During that he also started smoking heavily and discontinued oxygen. He had no psychiatric illness in past. During examination his wife was quite nervous and weeping continuously.

Questions

1. **How will you manage the emotional reaction of his wife?**
   Answer: We would give her time to ventilate and ask her queries regarding her husband's illness. We would try to know what her husband's illness means to her. We would explain her that behavioral symptoms are attributable to delirium in a simple language free of medical terms to the best possible level. Any misconception about the illness and its management would be dealt with the factual information. We would also try to get the support of other family members/ relatives if available. We would also tell her about different presentations of delirium with highlighting the importance of timely management in complete recovery in majority of patients.
2. **How will you proceed for detailed psychiatric examination in this case?**
   Answer: Screening and severity assessment can be done quickly using Delirium Rating Scale (DRS), Confusional Assessment method or with Mini mental status examination.[1-4]
   We would conduct detailed examination in following format.[1-4]
   1. Available history by patient, family, treating team, and other sources.
   2. Reviewing case records, medication details, investigation reports
   3. Physical examination
   4. Mental status examination

   a) General appearance, attitude, behaviour
   b) Psychomotor activity and speech
   c) Affect
   d) Thought
   e) Perceptual disturbances (may occur in any modality, but mostly visual)

f) Cognitive functions by testing consciousness (usually have reduced clarity of awareness of the environment), attention and concentration (usually have reduced ability to focus, sustain, or shift attention), orientation (time, place and person), immediate and delayed recall, recent and remote memory and construction abilities (by clock drawing test). If patient cooperates then we may also evaluate the remaining items such as comprehension, general fund of knowledge, abstraction and judgement.

5. Rating on DRS or CAM

3. What are the likely diagnoses?

Answer: Our diagnosis is 'Delirium due to a general medical condition' as he fulfilled following DSM-IV-TR diagnostic criteria:

A. Disturbance of consciousness (i.e., reduced clarity of awareness of the environment) with reduced ability to focus, to sustain, or to shift attention.

B. A change in cognition (such as memory deficit, disorientation, or language disturbance) or the development of a perceptual disturbance that is not better accounted for by a preexisting, established, or evolving dementia.

C. The disturbance develops over a short period of time (usually hours to days) and tends to fluctuate during the course of the day.

D. There is evidence from the history, physical examination, or laboratory findings that the disturbance is caused by the direct physiological consequences of a general medical condition.

The clinical history, physical examination, and laboratory studies are helpful in distinguishing delirium from other cases of global cognitive impairment such as dementia, depression, and functional psychosis.[5] Characteristic symptoms of other disorders are not mentioned in case details and available history points towards the diagnosis of 'delirium due to general medical condition'.

4. What are the potential causes of this disturbance?

Answer: The potential cause of delirium is hypoxia due to heavy smoking and discontinuation of oxygen in this index patient with chronic obstructive pulmonary disease. There are many factors that predispose patients to delirium such as older age, sensory (vision and hearing) or cognitive impairment, malnutrition, dehydration, systemic illness, metabolic disturbances, infections, anaesthesia, multiple medications, specific drugs, and addictive substances.[6] In general following steps should also be used to determine the causes of delirium.[6]

- Gather history from patient, health care providers, friends, and family.
- Establish whether there was recent exposure to anaesthesia or surgery
- Thorough physical examination to detect signs of systemic diseases.
- Evaluate for pain severity, duration, and intensity.
- Check all indwelling catheters/ skin breakdown for signs of infection.
- Evaluate for constipation or diarrheal, urinary tract infection, acid-base disturbance, hydration and nutritional status.
- Review the medication list and consider medication–medication interactions.
- Establish extent and acuity of the medical comorbidities with laboratory and diagnostic studies as appropriate.
- Review for substances of abuse and perform urine or serum toxicology if needed

- Consider electroencephalogram in seizure or postictal state.
- Review laboratory studies for evidence of renal, cardiac, hepatic, pulmonary, or hematological dysfunction.

Laboratory Workup

Information gained from the history, physical, and neurological examinations suggest laboratory studies to aid in determining the causes of the delirium. There is no single panel of laboratory tests that is recommended for all cases of delirium. CBC, electrolytes, liver function, renal function, thyroid function, adrenal function, glucose, calcium, magnesium, vitamin B_{12}, folate, erythrocyte sedimentation rate (ESR), arterial blood gas (ABG), and ECG may all be indicated. Depending on the clinical situation, HIV and hepatitis profiling may be appropriate. Urine drug and serum toxicology screens are frequently helpful. Computed tomography (CT) or magnetic resonance imaging (MRI) of the brain and EEG may be considered. Body fluid cultures and lumbar puncture may also be required.

5. How would you manage this case?

Answer: Burden due to delirium is very significant as it increases the need of nursing care, length of hospital stay, risk of cognitive decline, risk of functional decline, distress to caregivers and mortality.[5] Thus it should be managed at the earliest to prevent excessive morbidity and mortality.

Treatment

We would manage the index patient with following goals:

1. To find and to reverse the contributors to the delirium;
2. To ensure the patient's safety while educating patients, family, and staff;
3. The symptomatic treatment of behavioural disturbances associated with delirium;
4. Evaluation and management of tobacco dependence (smoking) in the later phase.

Nonpharmacological treatment

General care

General nursing care should follow vital sign measurements and fluid intake and output. Feeding should be done in the lucid intervals to reduce or to prevent aspiration, with several small feedings being desirable as much as possible. Providing sufficient and consistent staffing for the delirious patient also assists in orienting, educating, and protecting the patient with provision of the appropriate level of stimulation. Psychosocial interventions deepen rapport with the patient and family and move the treatment goals forward by improving adherence and satisfaction.

Environment and family

Attention should be paid to providing the appropriate level of stimulation and orienting cues. Least possible number of objects should be kept around the patient. Orienting cues include a large clock, calendar, well-lit room, and provision of eyeglasses and hearing aids if they are required. Darkening the room at night to help with the sleep–wake cycle is also important. Family should also assist in orienting the patient. Cooperative family members should stay with the patient to provide orientation cues, reassurance to the patient, and should also tell patient's observations to the treating team.

Educating family members

During the delirious episode, families can be educated as to appropriate ways to be supportive to the patient, as well as to what information is important to convey to the medical team. As the delirium symptoms resolve, the patient and family should be educated about the

long-term prognosis.

When appropriate we would also motivate him for quitting cigarettes and would teach him various coping strategies under relapse prevention. We would explain about benefits of using available pharmacotherapy such as nicotine replacement (gums), bupropion, varenicline.

Pharmacological treatment

For his behavioural disturbances we would start him on any of following low dose antipsychotics- Haloperidol (0.5 - 2 mg/day in 2-3 divided doses), Risperidone (0.5 - 1 mg hs), Olanzapine (2.5 - 10 mg hs) or Quetiapine (25 - 150 mg/day) and monitor for side effects and response in overall disturbances.[5]

Prevention

For the knowledge of all health professionals we are also adding the preventive aspects of delirium as it is the most effective strategy for reducing its frequency and complications. Successful preventive strategies include multicomponent approaches to reduce risk factors such as: orientation and therapeutic activities for cognitive impairment, early mobilization, non pharmacologic approaches to minimize the use of psychoactive drugs, interventions to prevent sleep deprivation, communicative methods and adaptive instruments (eyeglasses and hearing aids) for visual and hearing impairments and early detection of volume depletion.[5]

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Case discussion

Depression with Coronary Artery Disease

Priti Singh, K.C. Gurnani

Case vignette

Mr KS, 65 year old man was a known case of Coronary Artery Disease for last 10 years and undergone angioplasty 2 months back. During routine follow-up his Cardiologist noticed his disability far more than expected. Hence he was sent for Psychiatric consultation.

He presented as a well-groomed, cooperative person who appeared somewhat anxious and initially did not report any symptoms of depression. He commented on how difficult it was for him to attend the appointment due to his physical condition. He reported a progressive deterioration in his physical functioning such that he had quit his job 1 year ago and was currently having difficulties managing his home. However, he believed that his problems were physical, and he was surprised when his cardiologist had referred him for psychiatric assessment.

Soon after the interview began, he started crying and reported numerous recent stressors including the loss of his daughter in a car accident 2 years earlier, a cousin who passed away 1 year prior, and difficulties with his finances. He tended to ruminate over these events. Although he tried to smile during questioning and denied emotional problems, but later he admitted feeling depressed for the past year. He also reported a loss of interest in his hobbies of playing cards and gossiping with neighbors, as well as difficulty in concentrating and reading his favorite books. He expressed strong feelings of hopelessness regarding his medical condition and treatment options. As well, he endorsed suicidal thoughts and described profound feelings of guilt about his inability to take care of his physically disabled mother.

Questions

1. **How will you proceed for suicide risk assessment?**

   Answer: As we know that suicide is now understood as a multidimensional disorder which results from complex interactions of several risk factors such as psychiatric illness, chronic physical illness, stressful life events and sociodemographic factors.[1]

   Our patient has following risk factors

   - Age-65 years
   - Chronic physical illness–Coronary artery disease
   - Comorbid psychiatric illness –Depressive episode
   - Stressors-loss of daughter, cousin's death, quitting from job and consequent financial problems.

   All these together increased his vulnerability. As is evident from history, he is experiencing worsening of his physical condition and feels that this is responsible for difficulty to maintain appointments (neglect of his state). There is history suggestive of sadness for 1 year, loss of interest and difficulty in concentration. He has depressed affect, hopelessness and guilt. Hopelessness and guilt also indicate toward risk.[2]

   While interviewing such patient for suicidal risk assessment-calm, empathic non-judgemental approach should be taken asking the patient if he can share his

concerns with interviewer. The enquiry should be gentle starting with general questions about preoccupation with death wishes, thought regarding self-harm and gradually proceeding towards more specific questions about plans related to self harm or suicidality. Rushing questions like-"You don't think of suicide, do you?" should be avoided. Distress of the patient should be minimized. Specific questions like- Have you ever thought of harming yourself in past? Or have you been thinking of killing yourself? may bring out relevant information from patient. Asking patients about suicide does not put the idea in their heads. Rather truly suicidal patients are relieved to be asked about it.

Warning signs during the interview include

- Difficulty in Rapport
- Avoidance of eye contact
- Reluctance to answer specific questions
- Emotional detachment or anger

Specific assessment tools like –Tool for assessment of suicide risk, Suicide risk assessment guide may be used.

2. How would choose psychotropic agent for the given case?

Answer: While choosing the antidepressent the cardiac status of the patient should be taken into consideration. Tricyclic antidepressents because of their side effects like tachecardia, prolonged PR, QRS and QT intervals should not be used.[3]

Mono amine oxidase inhibitors are not recommended in such patients because of orthostatic hypontension and dietery reactions. SSRI's are the drug of choice specially citalopram and escitalopram. Escitalopram is the drug of choice in such a patient. These drugs have minimal interaction with cardiac drugs. They may also alter the pathophysiology responsible for the cardiac mortality thus improving the prognosis.[2] Bupropion and mirtazepine may be used as second line antidepressents if SSRI fails in patients with controlled blood-pressure.

3. How would you manage suicide risk in the index case?

Answer: The patient with high suicidal risk should be hospitalized for proper vigilance and care. Patient should be started on safer antidepressants as early as possible. This would include SSRI-Escitalopram. The medication should be supervised and care should be taken to keep away harmful objects from him. In view of his suicidal risk Electro Convulsive Therapy can be planned. Literature shows that ECT is safe in patients who can tolerate General anaesthesia.[4]

This will help in rapid resolution of symptoms. Special care should be taken when the patient starts improving as this period is high risk period for suicidal attempt who gains the energy to do so. There is also a role of Light Therapy if those patients where ECT is contraindicated. Psychotherapy can also be combined with pharmacotherapy.

4. How would you put consultation note and communicate to the treating physician?

Answer: Consultation note should follow an acknowledgement of the referral followed by the mention of the person/persons who have given the consultation. Unnecessary details of history and examination should not be included in consultation note. Relevant points in history and specific points in MSE pointing towards diagnosis are mentioned.

Advice to the treating physician should be given in context of hospitalisation, medications with their dosage, relevant instruction regarding safety of the suicidal patient. Clear instructions should be made regarding the review of the patient.

Example of consultation note

Thanks for referral

Case seen by Dr A–Senior Resident Psychiatry-Unit X

History of sadness, loss of interest and difficulty in concentration for one year with multiple stressors in past 2 years

On MSE - Patient is having depressed affect, ideas of hopelessness, guilt feelings and suicidal thoughts

Impression -Depressive Episode

Advise - 1. Tab. Escitalopram-5 mg HS; 2.Tab. Clonazepam-0.5 mg HS/SOS; 3- Supervised medication; 4 - Patient not to be left alone. Care should be taken to remove dangerous things from his surroundings.

Regular review with psychiatry unit and call in between in case of need

The note should be properly signed by the psychiatrist.

Instructions regarding transfer to psychiatry ward as per requirement may be given. In the case of transfer all the relevant records should be transferred along with the case file of the patient.

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Case discussion

Psychiatric disorders with hypothyroidism

Indira Sharma, Ganesh Shanker

Case Vignette

Mrs. X, a 45 years old female was a diagnosed case of Hypothyroidism. She was on regular treatment from Endocrinology clinic. She started complaining of loss of appetite, increased sleepiness, easy fatigability and inability to do the household work. Over the next few weeks her condition deteriorated. She stopped taking medication and meals and because of all these problems she was admitted in medical ward. During her stay in the ward she had frequent crying spells. She also expressed feelings of hopelessness, helplesness and death wishes to her treating physician. Her thyroid functions were sent and psychiatric consultation was planned. Patient bitterly reacted claiming she was not mad and was not having need for such consultation.

Questions

1. How will you motivate the patient for psychiatric consultation?
2. What risk factors should be taken care of in this patient?
3. What should be the pharmacological approach?
4. What are the long term management plans?

It is noteworthy that she completely denied any kind of psychiatric problem and attributed all her problems to hypothyroidism. She frequently expressed death wishes and even started crying during the interview, but no attempt of suicide was made. A brief psychotherapy session was given. With effort, after sometime rapport and therapeutic alliance could be established and the patient understood the need for treatment and agreed to take medication prescribed by the psychiatrist. Her irritability and hostility towards the examiner also reduced.

A diagnosis of major depression, moderate in intensity, first episode, with melancholic features, without psychotic features was made.

Following management plan was worked out:

1. As patient expressed marked hostility towards the examiner during interview, a detailed work up was planned to enquire into history of psychosis, depression and schizoaffective disorder in patient and her family.
2. Investigations:

It was planned to send the routine blood investigations and Thyroid function test for assessing the thyroid status.

3. Necessary advice will be given to patient and family regarding suicidal caution.
4. Treatment:

Assuming that bipolar / schizoaffective disorder diagnoses have been excluded, the patient may be treated with tablet

escitalopram 10 mg OD and methyltetrafolate 7.5 mg OD. Regular exercise (daily brisk walking for 30 mins) would also be advised.

5. If patient's thyroid report suggests hypothyroidism, the dose of thyroxin may be adjusted accordingly. The endocrinologist's expert advice may also be sought and his concurrence obtained for management of hypothyroidism/ thyroid malfunctioning. Thyroid hormone supplementation has generally been with T3, but occasionally T4 has also been used, which is generally well tolerated. In most published trials, T3 has been used in a dose of approximately 50 mcg/ day.[1]
6. If the detailed case work up suggests features of psychosis (schizoaffective disorder) patient may be put on Quetiapine. The starting dose would be Tab Quetiapine 25 mg b.i.d. which would be optimized over 4-5 days to 300-400mg per day depending upon the tolerance to side effects. If the patient does not improve in the ext 2 weeks, the dose may bee increased to 600-800mg/ day subject to tolerance of adverse effects.
7. If the detailed case work up suggests the possibility of bipolar depression, treatment with a mood stabilizer would be needed. The options would be quetiapine, lamotrigine, olanzapine-fluoexetine combination, lithium or valproate. Quetiapine (400 mg-600mg/ day), followed by lamotrigine would be the preferred choices. Patient's preference will be taken into account before selecting the drug for treatment. It would be better to avoid lithium as patient has been suffering from hypothyroidism and because lithium has limited efficacy in treating depressive disorder. Sodium valproate should be considered late in the treatment algorithm because it causes alopecia as a side effect which the woman may not accept. escitalopram may considered late as an option, because of its propensity to cause switch. If used it should given under cover of a mood stabilizer.
8. *Follow up:*
   First follow up is planned at one week with reports. During follow up there should be a close watch to detect any features suicidal behavior, psychosis, and early symptoms of switch to mania. If there is increase in severity of depression or of suicidal behavior, ECT should be considered.

Comments

1. The present case vignette illustrates the association between depression and thyroid disease. Depression is frequently associated with or is consequent to other medical conditions[2,3] or medications.[2] Prevalence rates of depressive disorder among patients suffering from a medical illness vary from 22-33%.[4]
2. The present case vignette re-emphasizes the importance of liaison in the field of psychiatry with other specialties for the better management of psychiatric illness with physical co-morbidities.

Carry Home Message

It may be difficult to distinguish a primary from a secondary depression occurring during or as a consequence of a physical disease or a side effect of various prescribed drugs. A

pragmatic approach is required in dealing with such patients.

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Case discussion

Psychosis in the post-partum period

Rajesh Sagar, Prashant Goyal, Raman Deep Pattanayak

Case vignette

Ms. D, a 25 year old female, was hospitalized in the obstetrics ward for delivery, which was complicated by excessive hemorrhage and sepsis. On 6th day of childbirth, a psychiatric referral was requested by the treating obstetrician; chief reasons as cited on referral were agitated behavior, decreased sleep and not taking an interest in the care of newborn for previous two days. The child was male, healthy and full-term. Psychiatrist interviewed the patient on the same evening. Ms. D appeared restless and slightly fearful. She reported that the doctors in the ward have been experimenting on her body and monitoring her activities through a hidden camera. She also reported that her food was being poisoned by ward staff in connivance with her husband. She could not be convinced otherwise despite repeated assurances. She reported hearing messages from God that her newborn was a reincarnation of devil. As a result, she refused to breastfeed and care for the child. She would suddenly burst into tears and frequent mood changes were seen. She would come out of bathroom half-dressed at times and her self-care had also deteriorated. Family members reported that she had become physically aggressive a few times and tried to run away from the ward. She refused to take any medication. Further inquiry revealed that she had similar episode five years ago following the birth of her first child, which remitted completely after a brief period of treatment.

Question 1: What are the diagnostic considerations?

Answer: As per DSM IV[1], the illness can be classified as psychotic disorder not otherwise specified. However, the psychotic illness with onset in puerperal period is often conceptualized as post-partum (*puerpural*) psychosis. The hormone shifts during puerpurium, obstetrical complications, genetic or environment induced changes in melatonin, sleep deprivation and an increased environmental stress are possible contributing factors for onset of illness. Though post partum psychosis is a heterogeneous entity and there is a debate regarding its nosological status, recent evidence suggests that post partum psychosis is a disorder of bipolar spectrum.[2,3] Evidence is based on certain shared clinical features, including a heightened sensitivity to sleep deprivation, a strong family history of mood disorders and emergence of clear affective episodes in follow up of women with post partum psychosis.

Generally, post partum psychosis begins within 1-4 weeks of delivery and is characterized by grandiose, persecutory or bizzare delusions, emotional lability, refusal to feed or care for the child, disorganized behavior, poor self-care and disturbed sleep. Patient may appear to be confused and a clinical picture resembling delirium may be seen.[3] As with any other acute psychosis, a possibility of psychotic disorder due to a general medical condition must be carefully excluded in all cases.

Question 2: Is there any risk of harm to the newborn?

Postpartum psychosis is often characterized by various delusions involving the infant. Nearly 50-70% of women report delusions about the new born (being ill-fated, devil or somebody else's child), and one-third may have thoughts of harming the infant. [4] Maternal Infanticide has been reported in postpartum psychosis (up to 4% in a study).[5] This patient was convinced that the child is a reincarnation of the devil and refused to care for the child. There appears to be a genuine risk of harm to the child and family member should be advised to separate the newborn from the mother to ensure safety. Once there is a complete and sustained resolution of the psychotic symptoms, mother may resume the care of the infant.

Question 3: What is the risk of recurrence in subsequent deliveries? Is there a role of prophylactic treatment?

Post-partum psychosis occurs in only 1-2 per 1000 childbirths; however the rates are 100 times higher in women with bipolar disorder or those with prior history of post partum psychosis.[3,6] In a long term follow up study, a subsequent puerpural episode was seen in 57% and a non-puerperal episode in 64% of patients.[7]

The patient should be closely monitored in future pregnancies in view of a high risk of recurrence. Ensuring proper steps to prevent loss of sleep near or after the delivery may avert an episode of postpartum psychosis. Prophylactic medication may be considered during late pregnancy or after childbirth to prevent recurrence. While no randomized controlled trials are available, available evidence suggests that mood stabilizers (especially lithium) and perhaps, atypical anti-psychotic agents may be effective in preventing an episode if given in late third trimester, or immediately after delivery to prevent in-utero exposure to medication.[6,8-10]

Question 4: What should be the line of management?

Answer: Once the diagnosis has been established, we should (a) educate the patient and family about the illness and risks involved, (b) initiate medication and supportive therapy, and (d) repeatedly assess the patient's function and safety status.[3] All patients should be assessed for a suicidal risk as well as the risk of harm to newborn.

Currently, there are no specific treatment guidelines for the management of post partum psychosis. The choice of drug should be based on the past and family history in addition to the type of underlying disorder. A female with a prior episode/s of mood disorder or having close family members with bipolar disorder is likely to benefit from treatment with a mood stabilizer with or without atypical antipsychotic agents. On the other hand, women who have a primary diagnosis of schizophrenia or is likely to have non-affective psychotic disorders may be initiated on atypical antipsychotics. The choice of medication also should be governed by the adverse effect profile for the mother and child. Electro convulsive therapy may be considered in patients who are unresponsive to pharmaco-therapy or have severe suicidal or homicidal risk. Supportive therapy should continue and issues related to maternal-child bonding and early parenting skills should be sensitively handled.[3,6]

The obstetrician and pediatrician should be appraised about the mother's mental status on regular basis. Before hospital discharge, a plan must be in place to incorporate close follow-up, continuation of medication, adequate sleep and reduction of stressors. In women with a prior episode/s, the pharmacotherapy may be continued for prolonged period as a prophylaxis for future puerperal and non-puerpural episodes.

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Case discussion

Depression in a patient with cancer

Ajit Avasthi, Sannidhya Varma

Case vignette

Mr TN, 47 years old married male, practicing advocate presented to a psychiatrist following a referral from a renowned oncologist. He was brought by his wife and brother. The family members reported that for about past 4 months TN was sad and irritable, sleeping and eating less, taking less interest in his work and friends and often feared death. The history reveled that he had a persisting mole on his right arm since childhood. It was only for the past 7-8 months that it started increasing in size and bled painlessly off and on. He took treatment from a local doctor in the beginning for about one month but it didn't help. On his friend's advice he consulted a dermatologist. After a careful examination, he advised biopsy of the lesion which revealed malignant changes suggestive of squamous cell carcinoma. The dermatologist told TN and his family members about the nature of disease and need to consult some oncologist. The man got angry on the remarks of the dermatologist. He doubted his competency and authenticity of the lab report. There after he started consulting almost all dermatologist and other specialists in the city. Biopsy was also repeated thrice from the reputed labs within and outside city but lab and specialist's opinion remained unchanged. Thereafter for about past 4 months he discontinued all consultations and treatments and also blamed medical specialists. He was spending most of his time at home and asked his colleagues to take care of his clients. He was also sleeping lesser than usual and spent his nights in reading medical literature related to cancer. Several times he also expressed his fears of death and worry about his family but later on he used to convince his family members about his suffering from only a trivial disease. Family members persuaded him for treatment but they felt it difficult to convince him. The family members almost forced him to visit an oncologist who in order to convince TN, advised him to get investigations repeated from the any lab of his own choice. On comparing the current and previous reports he confirmed the diagnosis and also remarked disease gradually worsening. He emphasized upon the urgent need to start anti-cancer medications or else surgical procedure would be needed along with medicines. His remarks again made TN angry and he bluntly stated that being an advocate he is aware of his legal rights to choose or not to choose a particular treatment and for any kind of damage including mental agony he could even sue any practitioner. Finding no way out, the oncologist advised family members to take him to a psychiatrist. This made TN irritated and he left the consultation room angrily leaving family members behind.

Questions

1. Discuss how the oncologist/dermatologist should have revealed diagnosis to the patient (with role play).
2. How would you proceed for the consent for treatment in such case?
3. What psychiatric management would you propose for this patient?

Analysis of the case

Mr. TN is a 47 years old married male, an advocate by profession (sense of control), with

a good social support from his wife and friends. The chief complaints in this case are refusal to believe the doctors that he is suffering from a malignancy even after repeated attempts to convince him of the same for the past 7-8 months (denial). The patient is also showing decreased interest in work, decreased sleep (depressive symptoms), a fear of dying (anxiety) and blaming medical professionals for his predicament and threatening them with legal consequences for the last 4 months (anger). The patient has also taken to researching the condition that the doctors opine he is suffering from.

Points that need to be assessed before proceeding further

(a) A longitudinal history of patient's coping style should be sought, especially in relation to physical disorders (what kind of defenses does he usually use?)
(b) History of cancer in family, friends and acquaintances, and the patient's impression about the same should be explored
(c) Patient's beliefs on how this diagnosis will affect his life
(d) Other psychosocial stressors that might be present
(e) What is the level of emotional support available to the patient?
(f) How did the dermatologist reveal the diagnosis to the patient? Was it revealed suddenly or in a gradual fashion? Did the physician make an attempt to reassure the patient and explain the prognosis of the disorder?
(g) Possible treatment modalities available to the patient and their pros and cons
(h) What has the patient's research revealed?
(i) Assessment needs to made for certain psychiatric disorders which are often found in patients suffering from cancer such as adjustment disorder (68%), depression (13%), organic mental disorders (8%) and personality disorders (7%).[1]

Psychiatrist and thenatologist Kubler-Ross made a useful organization to impending death:

(a) *Denial*: this can't be happening!
(b) *Anger*: why me? It's not fair!
(c) *Bargaining*: just let me live to see my children graduate.
(d) *Depression*: I'm so sad, why bother with anything?
(e) *Acceptance*: it's going to be OK.

Similar stages of grief are known to occur in patients undergoing any major stress in life. However it is not necessary that the patient will experience all the stages described by Kubler-Ross, or in this particular order.

1. Discuss how the oncologist/dermatologist should have revealed diagnosis to the patient?

Answer: The first step in revealing the diagnosis to the patient is that the doctor should himself have sufficient knowledge about the illness. In this case the doctor should know the points in favour of the diagnosis of squamous cell carcinoma. He/she should also know the prognosis of the said illness (95% to 98% of squamous cell carcinomas can be cured if they are treated early and have not spread, and once a squamous cell carcinoma has spread, the 5-year survival rate is less than 50%, even with aggressive cancer therapy) along with the various treatment options available to the patient along with their pros and cons (pharmacological including topical 5-flurouracil and injection interferon-á, or surgical management including excession, electro-dissection, cryosurgery and radiation).

The authors suggest that certain points need to be kept in mind while revealing a diagnosis to a patient: The treating physician should ensure that hope is preserved. He/she should acknowledge and empathize with the real stresses the patient is going through. While discussing the treatment modalities, balance must be maintained between potential benefits and side-effects. The treatment should be tailored according to the individual needs and personality style of the patient. One may have to appeal to patient's sense of worth (eg. you deserve the best medical care we can give, and that is why we are recommending this course of action) to keep him motivated to follow the treatment plan

2. How would you proceed for the consent for treatment in such case?

Answer: An informed consent entails Information provided by the treating physician, competence of patient to understand the information provided and the patient's freedom to choose the steps to be taken in the future.[2]

The information provided to the patient should include the nature of disorder, prognosis, treatment options and their impact on prognosis, reasons for specific treatment option being offered and its drawbacks as well as a statement that the consent could be withdrawn whenever the patient wishes. However there is a catch here: The patient might not comprehend the information being provided to him/her.

Competence of the patient is a matter of debate in matters especially of psychiatric disorders but sometimes in physical diseases too. While assessing the competence of the patient, one must gauge if the patient understands that he or she is in fact ill and requires treatment, is able to understand the information being provided (ask a few questions to make sure) and whether the patient has understood the nature and consequences of each treatment option. Only when a patient has fulfilled these three criteria reasonably well, can the consent given by him be considered valid.

The process of taking consent from the patient involves much of the same steps discussed in the answer to question 1, including the information provided to the patient regarding the illness and the treatment options available to him. However, in this case we must firstly focus on increasing acceptability of the patient towards the physical as well as the psychiatric symptoms, following which he is more likely to give his consent for further management.

3. What psychiatric management would you propose for this patient?

Answer: Psychiatric consultation may be requested when the patient manifests symptoms, behaviors, or beliefs that are a result of mixed messages, incomplete information, family or treatment team anxieties, or a complicated social, familial, legal, or ethical picture.[3]

Reasons behind requests for psychiatric consultations may be many, including a plea to convince the patient to do what the treating team thinks is best for him/her, to mediate conflicts between family members, between family and oncologists, between patient and specialists, or among members of the treatment team. Requests for psychiatric consultation might also be made to deliver bad news which the treating team wishes to avoid, or they hope that the psychiatrist may be able to contain the emotional turmoil aroused by the same. Although it is gratifying to the psychiatrist

to be perceived as being able to make these solomonic decisions, often these conflicts resolve with better communication between the involved parties.[4]

The psychiatric management in the present case would involve psychosocial and pharmacological interventions. Psychosocial interventions include establishing a rapport with the patient, psycho-educating about the nature and prognosis of the illness and teaching patient relaxation techniques. Supportive psychotherapy and cognitive behavioural therapy also have an important role to play in such situations. Pharmacological interventions include using antidepressant drugs such as escitalopram and sertraline because of their limited interactions with other drugs. Venlafaxine and duloxetine have an added benefit of acting on pain in patients of malignancies. Mirtazapine has the advantage of producing anxiolytic and hypnotic effect along with increasing the appetite which might be an important point to consider as many patients with malignancy or receiving chemotherapy have decreased appetite. Usually tricyclic antidepressants are reserved as the second line drugs because of tolerability issues and drug interactions which are more prominent than the newer drugs.[4] However, none of these drugs have any known interaction with 5-fluorouracil or interferon.[5]

The field of psycho-oncology is a growing branch of psychosomatic medicine. Management of patients when liaising with other fields of medicine requires detailed knowledge of the illness and effective communication skills.

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Case discussion

Emotional and behavioural issues in a child with leukaemia

Biswadip Chatterjee, Raman Deep Pattanayak, Rajesh Sagar

Case Vignette

Patient N is a 4.5 year old female belonging to a nuclear family. She was diagnosed with acute lymphoblastic leukaemia (ALL) and initiated on chemotherapy. The management entailed frequent brief hospital admissions for chemotherapy, imaging scans, bone marrow aspiration, lumbar puncture, blood tests and chemotherapy medications, including high dose steroids. In the current admission, she was found to be irritable, had frequent crying episodes and refused to take food and medicines. She often reacted violently whenever the nursing staff came to collect samples for investigations. She would also plead with her mother to take her home, making promises that she would be an obedient child and not do any mischief at home. She would not come to the play room and would cling to her mother. She would cry inconsolably if mother left her bedside even for a few moments. She would not allow her siblings to visit her lest they take the mother away from her. The treating doctors initiated her on sedatives, with no improvement. After a week of admission, the oncology team decided to seek consultation for psychological assessment and intervention.

Question 1: What are the possible reasons for the patient's behaviour?

Answer: The patient is currently of pre-school age and is not likely to comprehend the implications and severity of illness. She perceives the pain associated with procedures and the separation from mother as a form of punishment. Further, she may have depressive and anxiety symptoms which may be due to adverse effects of medications and reaction to frequent admissions and painful procedures.

Broadly, the psychological problems in paediatric patients suffering from chronic illnesses can be due to three reasons: (1) manifestation due to the normal developmental stage of the child, (2) reaction to illness and intervention and, (3) symptoms due to illness or intervention.[1,2]

1. *Manifestation due to the developmental stage of the child* – the developmental stage of a child determines his perception and understanding about illness as well as coping skills and defence mechanisms –
   (a) Pre-school children use magical thinking and so they may view cancer and the various procedures as a punishment for a bad thought or behaviour which can lead to increased anxiety and depression (as seen in this patient).
   (b) Early school age is characterised by limited logical thinking with rigid following of rules and regulations. In this stage they may understand only the symptoms as illness and seek concrete explanation to their symptoms. They may pride themselves in following the doctor's orders meticulously, which can

become frustrating if it does not bring the desired result.

(c) Adolescence is characterised by development of logical thinking, growing need for freedom and peer group involvement. They are often able to understand the complexity of illness and its impact on their life. However the restrictions imposed by the illness and the impact on their physical appearance and 'attractiveness' among peer group can cause frustration among them.

2. *Reaction to illness and intervention* – it may vary from severe depression and anxiety to no specific reaction. This depends upon the patient's understanding of illness, perceived stress, age, coping ability, family support, hospital environment and type of therapy. Some of the common causes of perceived stress which may result in severe emotional reaction include separation anxiety from caregivers, pain (actual and anticipatory) due to procedures, fear of or actual disfigurement, restricted environment (like in isolation) and lack of peers. Fear of death which is often common among adults is less common in paediatric age group due to lack of understanding of concept of illness, prognosis and death. It is also important to identify transient reaction versus more serious lasting emotional problems.
3. *Symptoms due to illness or intervention* – these include neurocognitive effect like disturbance in memory, attention, executive functions and intelligence due to CNS involvement of the disease, chemotherapy and cranial radiation. Besides surgical excision may result in loss of function due to the excised part. Pain, acute and chronic pain due to illness and treatment often cause psychological distress. Corticosteroids, routinely used in paediatric cancers as well as other chronic illnesses, may lead to a range of emotional and behavioural symptoms. These symptoms show an increased trend for younger children.[3]

Question 2: How would you like to manage the patient?

Answer: The psychosocial interventions are the mainstay of management in paediatric patients with chronic illnesses displaying emotional and behavioural problems.[3-5]

1. *Psychological intervention:* Psychological interventions specific for increasing coping skills among patients with cancer are –
   (a) *Illness related issues* – Communication and open discussion between patients and treating physicians and also between patients and their parents result in decreased anxiety, more cooperation for treatment and positive adjustment for illness. The language should be understandable by the children, but not cause undue emotional disturbances. Discussions on difficult topics must preferably be done in presence of a mental health professional.
   (b) *Painful procedures* – giving choices to patient, explaining the procedure and the pain associated, avoiding false assurances and use of distraction techniques, hand-holding during the procedure increase cooperation by the patient. Role playing is an especially useful method to gain cooperation for medical procedures e.g. i.v. therapy in case of very young children, who may be unable to understand the detailed explanations.
2. *Parental interventions:*
   (a) Preparation of the caregivers by telling them in advance the anticipated the course of illness and challenges in

management.

(b) Teaching parents how to deal with questions about illness asked by patients, easing child distress during procedures by distracting, using positive reinforcement and control their own anxiety regarding illness and keeping themselves motivated to continue care of the child.

(c) Teach them stress reduction techniques like relaxation exercises and help them in time management between the patient and other children in the family. It will help to increase the resilience and prevent burn-out of caregivers.

The psychosocial interventions can be delivered by any mental health professional for pediatric patients as well as their caregivers.

Question 3: What are the various strategies to help the patient and family members?

Psychosocial interventions should include explaining to the child that the procedures are not a punishment given to her. Further, the child's fear that if mother goes out of sight she will not return (*object permanence*) should be addressed. The caregiver and the treating team should be taught about ways to lessen pain by taking least possible number of samples, increase patient's cooperation by reward, use distraction technique and local anaesthesia. Session with parents should be taken jointly by the mental health team and issues like course and prognosis of illness, psychiatric symptoms of the patient, time management between patient and other children should be addressed. Feelings of hopelessness, despair, frustration should be identified among the family members and dealt with. Loss of finance, occupation and care of other children must be addressed by a psychiatric social worker. A meeting with the treating team should be arranged and it must be emphasised that right and adequate information regarding illness and management be passed on to caregivers. Further, they should be sensitized about the side-effects due to the medications and simple measures to get increased the cooperation from the patient and family members. In spite of the above mentioned efforts, if there is inadequate interaction between the three groups – the patient, the family members and the treating team, the C-L team has to adopt the role of a mediator to ensure best management of the patient.[3-5]

Question 4: Is there a role for pharmacological management in the patient?

Answer: For minor behavioural or emotional problems, psychological interventions should be tried first. If the psychiatric symptoms persist and increases to a diagnosable threshold of depressive or anxiety disorder, medications should be started. Some general rules that should be kept in mind:

(a) Psychological interventions should be given preference, but do not wait if there is clearly diagnosable illness like psychosis, delirium or severe depression.

(b) Pharmacological interventions to be given always in combination with psychosocial interventions.

(c) Start low and increase dose slowly.

(d) Check for drug interactions with the already continuing medications.

(e) If an offending drug is responsible for behavioural symptoms, then negotiate with oncology team if it can be stopped or dose can be reduced.

(f) Frequent monitoring of symptoms and medications.

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Case discussion

Distress with terminal illness

Rajnish Raj, B.S. Sidhu

Case vignette

A 57 year old female, mother of an intern, who had come to daughter's hostel and suddenly developed dyspnoea and palpitation while climbing stairs to her room. She reported that she had been dyspnoeic multiple times during past 1-2 months but did not bother to report it to family members.

Her intern daughter took her to medicine emergency room where Chest X Ray revealed marked pleural effusion. Therapeutic and diagnostic pleural tapping was done. She was put on Anti tubercular treatment considering past history of tuberculosis. But within a week she returned to the emergency room with worsening of symptoms. Her pleural effusion report revealed some malignancy and she was admitted in medicine unit and thorough investigatory work up was done which revealed stage IV ovarian cancer (with multiple metastasis).

Patient profile

- 57 yr old female
- c/o – dyspnoea and palpitation (duration – 2 months)
- Chest X-ray – marked pleural effusion
- Diagnosis – Stage IV ovarian cancer with multiple metastasis
- Note – didn't bother to report her symptoms to family members

Questions

1. **How do you advise treating team to break the bad news?**

   Answer : **BREAKS Protocol**[1] – Background, rapport, exploring, announce, kindling and summarize.

   ABCDE protocol – Advance preparation, build a therapeutic environment / relationship, communicate well, deal with patient and family reactions, encourage and validate emotions.

   SPIKES – A Six-Step Protocol for Delivering Bad News[2]

   SPIKES – A Six-Step Protocol for Delivering Bad News

   - S—SETTING UP the Interview
   - *Arrange for some privacy*.
   - *Involve significant others*.
   - *Sit down*.
   - *Make connection with the patient*.
   - *Manage time constraints and interruptions*.
   - P—ASSESSING THE PATIENT'S PERCEPTION
   - I—OBTAINING THE PATIENT'S INVITATION
   - K—GIVING KNOWLEDGE AND INFORMATION TO THE PATIENT
   - E—ADDRESSING THE PATIENT'S EMOTIONS WITH EMPATHIC RESPONSES
   - S—STRATEGY AND SUMMARY

2. What model of consultation liaison is useful in this setting?

Answer: Models for consultation liaison

Depending on the focus of consultation

- Patient oriented approach[3]
- Crisis oriented approach[4]
- Consultee-oriented approach[5]
- Situation oriented approach[6]
- Expanded psychiatric consultation[7]

Depending on the function of the models

- Consultation model
- Liaison model
- Bridge model
- Hybrid model
- Autonomous psychiatric model

Depending on the focus of work

- Critical care model
- Biological model
- Milieu model
- Integral model

Difficulties faced by doctors

- Lack of formal training
- Uncertainty of patient's reaction
- Fear of increasing patient's stress
- Damage to doctor – patient relationship
- Uncertainty about responding to patient's questions

Logical steps by Lloyd & Bor[8]

- Personal preparation
- Physical setting
- Talking to the patient and responding to concerns
- Arrange follow-up
- Feedback to colleagues

3. How to manage this case?

- Consultation liaison (Hybrid model)
- Psycho-pharmacological interventions
- Integrated health care approach
- Regular follow-ups
- Palliative care
- Spirituality[9]

Palliative care is an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illnesses, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual.

The following can be considered to be basic principles of intervention in palliative care:

- Symptom control (identification, detection of their causes, establishing realistic objectives, defining appropriate therapeutic measures).
- Communication and emotional support.
- Organization of the intervention and the multidisciplinary team.
- Complex dimension.
  "The way in which people understand their lives in view of their ultimate meaning and value".
- Protective factor against depression.

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PG Quiz: Q & Ans.

Scratch your brain: Post graduate quiz

Naresh Nebhinani, Rajeev Dogra

Q -1: What is the Endicott's criterion for diagnosing depression?

A-1: Endicott has given criterion for diagnosing depression in medically ill, as patients used to present with somatic symptoms which might be due to depression or physical disorders. These have four approaches[1]:
Inclusive approach includes all DSM-IV-TR criteria for depressive disorder, regardless of the patient's condition, and has poor specificity.
Etiological approach searches for an etiology to the physical symptoms. This cannot always be found and, even when found, still does not exclude its coincident role in causing depression.
Exclusive approach eliminates all physical symptoms and may not leave enough criteria for a reliable diagnosis.
Substitutive approach replaces somatic symptoms with non-somatic symptoms.

Q-2: What are the possible mechanisms explaining the higher risk for coronary artery disease in patients with depression?

A-2: The exact mechanisms by which depression may increase coronary disease risk have not been established, but potential mechanism may be organized into behavioral and biological pathways. Behavioral mechanisms include social isolation, physical inactivity, poor adherence, and smoking. Biological mechanisms include hypothalamic-pituitary-adrenal axis dysregulation, autonomic dysregulation, and decreased platelet aggregation.
Hypothalamic-pituitary-adrenal axis dysregulation in depression leads to elevate cortisol levels. Elevated cortisol has toxic effects on the coronary artery endothelium and plays a role in the development of plaque.
Autonomic dysregulation with diminished cardiac vagal modulation and increased sympathetic nervous system activation occurs in depression. This may provide a substrate for increased arrhythmic activity and sudden death.
Decreased platelet aggregation that leads to increased thrombus formation may also play a role in increasing risk of coronary events in depression.
Serotonin transporter gene polymorphism among CAD patients, carriers of short allele of the serotonin transporter promoter gene 5-HTTLPR are more vulnerable to depression, perceived stress and high levels of norepinephrine, possibly contributing to worse outcomes in these patients.[2]

Q-3: Who has introduced bio-psychosocial approach in psychiatry?

A-3: Adolph Meyer (1958) formulated the 'psychobiological approach' to patient assessment that emphasizes the integrated assessment of development i.e. psychological, social, environmental, biological aspects of the patient's condition. Basic concept of the bio-psychosocial model is implicit in his approach.[3]

George Engel (1977) coined the term 'bio-psychosocial' derived from general systems theory and based on conceptual ideas introduced much earlier by Franz Alexander and Adolph Meyer.[3]

Q-4: What are the stages of death and dying?

A-4: Elisabeth Kubler-Ross postulated five stages that many dying patients pass thorough from the time that they first become aware of their fatal prognosis to their actual death. These are denial, anger, bargaining, depression and acceptance.[4]

Q-5: Name any three severe adverse drug reactions (ADR) of psychotropics which are reasons for emergency referral/ intervention.

A-5: Neuroleptic malignant syndrome, laryngeal dystonia/ other acute dystonia, serotonin syndrome, lithium toxicity etc.

Q-6: What is the difference between consultation and liaison?

A-6: 'Consultation' typically refers to the response by a psychiatrist to a request from a medical colleague for expert diagnostic and therapeutic advice regarding the behavior and psychological status of an individual patient.

'Liaison' refers to interventions of the psychiatrist at a systems level where psychiatrist may assess all patients or at-risk patients. Diverse kinds of interventions may be involved. The psychiatrist may link with members of the professional medical team for effective collaboration on treatment goals. There is a strong educational and research component in which the liaison psychiatrist enhances the behavioral skills and knowledge of the staff.[5]

Q-7: What is type D personality? Is there any association between type D personality and physical disorders?

A-7: Subjects with type D personality are distressed persons who frequently experience negative emotions. They score high on negative affectivity and social inhibition personality dimension. Type D personality is found to be associated with higher cardiovascular reactivity and higher risk for atherosclerosis and coronary artery disease.[6]

Q-8: What are the basic components of informed consent?

A-8: The basic elements of the informed consent include:

1. Full disclosure of the available information,
2. Adequate comprehension on the part of the participant/ patient, and
3. The participant's voluntary choice to participate.[7]

Q-9: Name any three benzodiazepines which don't have any significant cytochromal metabolism.

A-9: Lorazepam, oxazepam and temazepam.[8]

Q-10: Is there any dose relation with

steroid induced psychiatric disturbances?

A-10: Yes, steroid induced psychiatric disorders are dose related. As patients on <40 mg daily dose of prednisone has 2% risk of psychiatric side effects, whereas this risk increases to 5% with an increase to 40-80 mg and 20% with >80 mg dose of prednisone.[9]

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Instructions for contributors

The Journal of Mental Health and Human Behaviour (JMHHB) is the official publication of the Indian Psychiatric Society – North Zone, that considers for publication articles in all fields of Psychiatry. The Journal aims to provide an update on the research work in Northern India in the field of mental health. Submissions should be sent, preferably by e-mail, along with a covering letter and a contributor's form signed by all authors to:

Dr Rajesh Sagar
Additional Professor
Department of Psychiatry
AIIMS, Ansari Nagar
New Delhi-110029
Email: drrajeshsagar@gmail.com

The covering letter must include information on prior or duplicate publication or submission elsewhere of any part of the work/study; and a statement of financial or other relationships that might lead to a conflict of interest. Copies of any permission(s) to reproduce published the material, and to use illustrations or report information about identifiable people must accompany the manuscript. The format for contributor's form has been provided along with these Instructions for contributors.

Editorial process

The manuscripts will be reviewed for a possible publication with the understanding that they are being submitted to one journal at a time and have not been published, simultaneously submitted, or already accepted for publication elsewhere. All submitted manuscripts shall undergo an editorial review initially. Manuscripts with insufficient originality, serious scientific flaws or absence of importance of message are rejected. Rest manuscripts shall be sent to expert reviewers without revealing the identity of the contributors to the reviewers. Within a period of three months, the contributors will be informed about the reviewers' comments and acceptance/ rejection of manuscript. Accepted articles would be copy-edited for clarity, readability, grammar, punctuation, print style and format.

Type of manuscripts

The Journal publishes editorials, review articles, original articles, brief communications, case reports and letters to editor. Editorials generally reflect on an important current theme of psychiatry. Review articles (up to 4,500 words, excluding abstract and references) summarize an important area of literature. Original articles describe an original research work (up to 3,500 words). Brief communications (up to 1,500 words) provide a short account of an innovative, novel work or preliminary findings from work still in progress. Case reports (up to 1,000 words) highlight an unusual case of significance to the field. Letters to editor (generally up to 500 words) can deal with a recently published article or personal observations on a theme of relevance or can be a short, succinct research-based letter.

From time to time, the journal shall also invite guest editorials, articles for debate, viewpoints, book reviews etc.

Preparation of manuscript

Manuscripts must be prepared in accordance with "Uniform requirements for Manuscripts submitted to Biomedical Journal" developed by International Committee of Medical Journal Editors (2006).The manuscript should be typed on A4 size (212 × 297 mm) paper, with margins of 1 inch from all the four sides, using double-spacing throughout. Type or print on only one side of the paper and number the

pages serially, beginning with the title page. Arrange manuscript in following order:

Title page

Mention the type of manuscript, title of the article, running title not more than 50 characters, names of the contributor (In full, first name, middle name, last name), along with designations and institutional affiliations, the name of the department(s) and institution(s) to which the work should be attributed. Designate a corresponding author with name, address, phone numbers, facsimile numbers and e-mail address of the contributor responsible for correspondence. Mention the total number of pages, tables and word counts separately for abstract and for the text (excluding the references and abstract). If the manuscript was presented at a meeting or conference, mention the related details.

Abstract page

It should carry the full title of the manuscript and an abstract (of no more than 250 words for original/review articles and 150 words for case reports). Abstract should briefly state the background, aims, methods, results and conclusion. Three to six keywords should be provided.

Main manuscript

It should be organized under four broad headings: Introduction, Material and methods, Results and Discussion. There should be a clear description of the sampling and statistical techniques used for the study.

Reports of clinical trials should be based on the CONSORT statement. Reporting guidelines for specific study designs should be followed. Refer to the following weblink:

http://www.equator-network.org/home/

When reporting experiments on human subjects, procedures followed should be in accordance with the standards ethical committee on human experimentation and with the Helsinki Declaration of 1975, as revised in 2000, of which a clear mention should be made in the text. The manuscript should ensure full confidentially in presentation of data and meet all ethical considerations. Avoid the duplication of findings between the tables and text. Discussion should be relevant and focused.

Acknowledgement

Specify contributions that need acknowledging, but do not justify authorship, such as general support by a departmental chair and acknowledgments of technical, financial and material support.

References

References should be numbered consecutively in the order of their first mention in text. Identify references in text by Arabic numerals in superscript. References cited only in tables or figure legends should be numbered in accordance with the sequence established by the first identification in the text of the particular table or figure. The titles of journals should be abbreviated according to the style used in Index Medicus. List the first six contributors followed by et al.

Standard journal article

- Seshadri L, George SS, Vasudevan B, Krishna S. Cervical intraepithelial neoplasia and human papilloma virus infection in renal transplant recipients. Indian J Cancer 2001; 38: 92-5.

Chapter in a book

- Phillips SJ, Whisnant JP. Hypertension and stroke. In: Laragh JH, Brenner BM, editors. Hypertension: pathophysiology, diagnosis, and management. 2nd ed. New York: Raven Press; 1995. pp 465-78.

Personal author

Book

- Ringsven MK, Bond D. Gerontology and leadership skills for nurses. 2nd ed. Albany (NY): Delmar Publishers; 1996.
  For further details, refer to the following weblink: http://www.nlm.nih.gov/bsd/uniform_requirements.html

Tables

Tables should be self-explanatory and not duplicate text material. Type each table with double-spacing on a separate sheet of paper. Limit number of tables to the minimum required.

- Number tables, in Arabic numerals, consecutively in the order of their first citation in the text and supply a brief title for each.
- Place explanatory matter in footnotes, not in the heading. Explain in footnotes all non-standard abbreviations or symbols that are used in each table.
- Obtain permission for all fully borrowed, adapted, and modified tables and provide a credit line in the footnote.

Contributor's form

ManuscriptTitle : ……

I/we certify that I/we have participated sufficiently in the intellectual content, conception and design of this work or the analysis and interpretation of the data (when applicable), as well as the writing of the manuscript, to take public responsibility for it and have agreed to have my/our name listed as a contributor. I/we believe the manuscript represents valid work. Neither this manuscript nor one with substantially similar content under my/our authorship has been published or is being considered for publication elsewhere. I/we certify that all the data collected during the study is presented in this manuscript and no data from the study has been or will be published separately. I/ we attest that, if requested by the editors, I/we will provide the data/information or will cooperate fully in obtaining and providing the data/information on which the manuscript is based, for examination by the editors or their assignees. I/we also certify that we have taken all necessary permissions from our institution and/or department for conducting and publishing the present work. Conflicts of interests, direct or indirect, that exist or may be perceived to exist for individual contributors in connection with the content of this paper have been clearly disclosed in cover letter. Sources of financial support of the project are named in the cover letter.

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	Name	Signature	Date
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____

General rules for submission of IPS-NZ award papers

For any paper to be considered for an award, it shall be necessary for the author to submit four copies of the full paper to the Chairman, Awards Committee by a date determined by the Chairman, Awards Committee.

To be eligible for the award, the paper must fulfill each of the following criteria:

(a) It must be a research paper based on work done in India and must not have been published in a scientific journal nor presented at a National or Inter-national Conference.

(b) The principal author and at least 50% of all authors and the person presenting the paper must be members of the North Zone, I.P.S.

(c) The coauthors who are not members of the society are not eligible for receiving cash prize or certificate.

The full papers received for consideration for the Awards shall be considered by a panel of judges appointed by the Chairman, Awards Committee who shall select papers of sufficient merit for final rating at the time of presentation. Out of the papers considered to be of sufficient merit by majority of judges, the Chairman, Awards Committee shall select three papers for each award with the highest pooled percentage scores for presentation at the Annual Conference.

A panel of judges will be appointed by the Chairman, Awards Committee. Out of the total marks, 60% will be for preparation and compilation of the paper and 40% for its presentation at the Conference. The paper with the highest pooled rank order shall be declared the winner, In case of a tie, both the papers will be declared as joint winners.

All the authors of the Award winning papers, who are the members of the IPS, North Zone. shall be considered to have won the award and will be issued certificates and be eligible for the award money as follows:

(a) 25% of the money shall go to the author presenting the paper.

(b) The remaining 75% shall be distributed as follows:

  (i) If there are two authors who are eligible for the award money, 60% to the principal author and 40% to the co-author.

  (ii) If there are more than two authors who are eligible for the award money, 50% to the principal author and 50% to be equally divided amongst the co-authors.

If in the opinion of a majority of judges, no paper is of high enough merit, there will be no award that year.

No paper shall be eligible to context for an award where a member who has won that award in the immediately preceding year appears as an author or co-author.

None of the judges of the award and none of the members of the Awards Committee shall be contestant for any Award that year.

The assessment of papers by the panel of judges as certified by the Chairman, Awards Committee shall be ratified by the Executive Council of IPS (NZ).

The practical and logistic problems from time to time in assessment process will be dealt with appropriately by the Chairman Awards Committee in consultation with President.

General rules for submission of IPS-NZ award papers

No one paper or substantially similar paper shall win more than one award on the basis of presentation at the Annual Conference, in case more than one award is announced at a Conference.

The paper can be considered only for the category for which it has been nominated.

All the papers submitted for awards will be the property of the zone for publication in the Journal of the Society.

The authors should furnish a declaration containing following items at the time of submission.

(a) The Principal author and 50% of the co-authors are members of society

(b) This or substantially similar paper has not won an IPS North Zone Award earlier or been submitted for another award this year.

(c) This or substantially similar paper has not been published or been submitted for publication in any scientific journal.

(d) Consent from all authors about sub-mission of the paper and a certificate that there is no copy right infringement in the contents of the paper.

(e) None of the author has won the same awards in the immediate preceding year

SPECIFIC GUIDELINES

Dr. A.K. Kala Award

This award will be given for original research in Biological psychiatry. There is no age bar. Award Money: Rs. 2,500/-.

Dr. Buckshey Award

This award will be given to the paper presented by the member of North Zone IPS who is not above 35 years of Age at the time of presentation. Award Money Rs. 1000/- The paper must be accompanied with proof certifying age of the Principal/Presenting author.

Dr. G.C. Boral Award

There is no age bar to compete for this award. Award Money: Rs.1000/-

Nomination for Bombay Psychiatric Society Silver Jubilee Award (Best Paper of the conference):

All the award papers can compete for the best paper award. The authors, if they desire to compete for this award, should send a declaration about their desire and willingness to compete for the nomination for the BPS award. It may please be noted that the papers submitted for the Awards of IPS-North Zone will not be automatically considered for the nomination for the BPS Award, unless a specific declaration to that effect is provided in writing at the time of submitting the paper or before the last notified date for submission of the award papers.

Free papers (i.e. the papers other than the award papers) can also compete for the best paper award to the nomination for BPS award. For this, the authors of the free paper must submit four copies of the full text of their paper along with the declaration as explained above, to the Chairpersons, Awards Committee. This submission will have to be in addition to the four copies of abstract of the free paper to be submitted to the President.

The last date for sending the full text of the paper with the declaration will be the same as the last date notified for the submission of the Award Papers.

GUIDELINES FOR EVALUATION OF AWARD PAPERS

A panel of judges shall rate the papers. There shall be three judges in each panel. Out of the total numbers i.e. 100, 60% will be for preparation and compilation of the manuscript & 40% for presentation during the conference. The assessment of the written manuscript will be on the following pattern:

Written manuscript evaluation	**60 marks**
(a) Topic/Title, its relevance and methodology.	12
(b) Survey of literature/reference bibliography.	12
(c) Presentation of results/discussion.	12
(d) Conclusion and how far they are substantiated by the study.	12
(e) Clarity, lucidity, precision of language and over all elegance of paper.	12

Presentation during conference:	**40 marks**
(a) Style, clarity, compactness of expression and presentation	20
(b) Use of audiovisual aids (if any) appropriateness, quality visibility comprehensibility and novelty	10
(c) Response to points raised in discussion	10

*In case no paper is found to be of sufficient merit (e”50% marks), there shall be no award.

Panel for selection of best paper to be nominated for BPS award

There will be two panels of three judges, one for evaluation of manuscript and one for presentation, for award papers submitted, and the full papers/manuscripts of the free papers submitted for BPS award.

Presentation during conference	**25 marks**
(a) Style, clarity, compactness of expression and presentation.	10
(b) Response to points raised in discussion.	10
(c) Use of audiovisual aids, if any Appropriateness, quality, visibility, comprehensibility, and novelty.	5

Written manuscript evaluation	**75 marks**
(a) Topic Title its relevance and methodology.	15
(b) Survey of literature/reference bibliography.	15
(c) Presentation of results and discussion.	15
(d) Conclusion and how far they are substantiated by the study.	15
(e) Clarity, lucidity, precision of language and over all elegance of paper.	15

INDIAN PSYCHIATRY SOCIETY

NORTH ZONE

1. **Full name in block letter:**

   ……

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2. **Place & Date of Birth** ……...

3. **Mailing Address** ……

   ……

   ……..…..

Affix Photo

4. **Permanent Address** (if different from the above):

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5. **Email id** ……... **Contact No**……

Remarks by Gen Secretary and Treasurer	Decision by the Council
	President
	Date of Election

6. **Qualifications:**

(Bachelor's degree and above):	Degree/ Diploma University	Month & Year

7. **Professional training in your specialty:**

Designation	Name of Institution	From to (Month & Year)