REVIEW

The Management of Anxiety, Depression and Insomnia in the Acutely Ill Medically Ill Patient

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Abstract. Anxiety, depression and insomnia are common conditions among medically ill patients. Such disorders may be reactions to the hospital environment, categorical psychiatric disorders or symptoms of the medical condition. Treatment includes both psychotherapy and rational psychopharmacology that considers both the route of administration and side effects of the agent utilized. (*Keio J Med* 43 (2): 75–78, June 1994)

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Introduction

Anxiety, depression and insomnia frequently occur within general hospital settings.¹ The disparity between the prevalence of such distressing syndromes and physician recognition suggests problems in both physician's attitudes and patient's responses (Table 1).^{2,3} The under-recognition of such syndromes by physicians may be due to their attitudes, ability to gather necessary information or lack of understanding about psychiatric diagnosis. Many physicians view sadness and fear in the medically ill as an understandable response to illness rather than a specific disorder that mandates treatment. Physicians often avoid asking questions about emotional states due to unnecessary fear that such queries will increase dysphoria. Finally, many physicians do not understand psychiatric nomenclature and diagnostic categorization. In addition to the physician's role in underrecognition, many patients are reticent to admit that they are fearful or demoralized. Patients whose style is one of privacy exemplify this tendency to minimize emotional distress. To further complicate accurate diagnosis of emotional disorders, the symptoms of other diseases such as endocrine disease or neoplastic disorders overlap with the symptoms found in depression and anxiety. Dualistic thinking allows clinicians to view patients as having "either" a psychiatric disorder "or" an organic malady. In fact it is common for patients to have a medical and psychiatric disease comorbidly. It is essential that the physician correctly identify and treat such emotional

disorders as untreated anxiety and depression may augment morbidity and mortality or increase the length of hospital stay.⁴

Anxiety

Anxiety is an unpleasant emotional feeling that connotes fear of a future threat.⁵ Although the clinician must rule out organic factors both organic and psychological issues are present and treatment should consider both factors. The prevalence of clinically significant anxiety in the general hospital setting has been found to be at least nineteen percent in a recent study by Levenson, *et al.*⁶ Anxiety, depression and insomnia may each

Table 1 Factors Contributing to Underrecognition of Emotional Disorders in the Medically Ill

1. Physician Attitudes
A. Emotional pain is understandable and need not be treated
B. Anxiety or depression represents personal weakness
C. Such disorders cannot be effectively treated
2. Physician's Knowledge and Skills
A. Poor communications skills that fail to elicit adequate data
B. Inadequate information about psychiatric diagnosis
3. Patient Factors
A. Inability to communicate
1. Due to illness and treatments, <i>i.e.</i> on ventilator
2. Personality style that limits or minimizes emotions
B. Fears that they will be considered psychotic

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be categorized as a discrete psychiatric disorder, as a reaction to the hospital environment or medical disorder for which the patient is being treated or as a symptom of the underlying medical disorder. Thus a patient may be anxious due to fear of experiencing a panic attack, be worried that a bone marrow biopsy will be painful or experience agitation due to prednisone medication. Anxiety disorders encompass a variety of categories that include adjustment reactions with anxious mood, generalized anxiety disorder, panic disorder, post traumatic stress disorder and obsessive compulsive disorder. The adjustment reaction with anxious mood is the most commonly encountered in the general medical setting. The hospitalized patient often fears separation from familiar surroundings and family but is also frightened by the impact of serious diseases and the noxious effects of medication and treatment. Many patients cannot tolerate imaging procedures due to acute anxiety caused by the closed space of the scanning machine.^{7,8} Both medications and disease states can cause anxiety of foster such dysphoria in the already anxious patient. Medications such as prednisone, thyroid supplement or sympathomimetic bronchodilators can cause anxiety, while hyperthyroidism, pulmonary emboli or the aura of temporal lobe epilepsy may present as anxiety.⁹ The pain inherent in a variety of disease states further augments anxiety.¹⁰ Conversely, anxiety augments pain intolerance and mandates that anxiety be effectively treated so patients can cope with acute pain difficulties. Agitation, which is a hypermotoric response to confusion and inability to process information should not be confused with anxiety, a subjective emotional state which has both psychological and autonomic symptoms such as increased respiration, heart rate and pupillary dilation. Agitation is often seen as a predominant symptoms in delirium, an acute organic brain syndrome.¹¹ This disorder is characterized by fluctuating states of consciousness and confusion. It is imperative to ascertain the underlying cause of delirious states which are often due to hypoxia or drug effects especially in the elderly. Agitation in the delirious patient is best treated by neuroleptic medication such as mellaril or haloperidol.¹²

Treatments for acute anxiety include psychotherapeutic strategies of emotional support and education for those patients who need information. Assessment of whether such patients need information depends upon their character style. It is important to tailor the type of psychotherapy to the personality style of the patient.¹³ The controlled orderly person will often require information to retain a sense of mastery over his condition while the dramatic emotive patient is better served by a caring attitude and reminders that they are being brave in facing such a difficult situation. The paranoid suspicious patient is best managed by allowing emotional distance. The very passive dependent individual responds to gentle

encouragement to become more active. In addition, behavioral strategies such as systematic relaxation or imagery via recorded tapes also reduce anxiety. Covert suggestions that an individual will do well also helps reduce anxiety in the patient awaiting a fearful procedure. Specifically telling the patient that they will be seen following the procedure covertly suggests that they will survive the procedure and do well.

Psychopharmacologic approaches to anxiety must consider the target symptom to be treated, the appropriate route of administration, the rapidity of onset and medication side effects (Table 2).¹⁴ Although chronic anxiety responds to tricyclics and buspirone, acute anxiety mandates rapid treatment. Thus, acute anxiety in the medical setting is best managed by benzodiazepines (Table 3). Benzodiazepines differ in half life and presence of active metabolites. Some benzodiazepines undergo microsomal oxidation in the liver that produces active metabolites while other directly undergo glucuronide conjugation to produce essentially inactive substances. Thus in patients with hepatic disease, oxazepam and

Table 2 Issues in Psychopharmacology

		Example
1. Target Symptom to Ameliorate	agitation anxiety depression	neuroleptic benzodiazepine sympathomimetic
2. Speed on Onset	rapid slower delayed	lorazepam diazepam tricyclic
3. Route of Administration	sublingual intramuscular	alprazolam lorazepam
4. Side Effects	sedation, ataxia tachycardia tardive dyskinesia	benzodiazepine methylphenidate haloperidol

Table 3 Benzodiazepines

	Range for Elimination Half Life (hours)	Presence of Active Metabolite	Approximate Dose Schedules
Short Acting Preparations			
Triazolam*	1.5–5.5	none	0.125–0.25 mgm qhs**
Lorazepam	10–25	none	1 mgm tid
Oxazepam	5–15	none	15 mgm bid
Mid Range			
Alprazolam	6–16	weakly	0.25 mgm tid
Temazepam*	8–20	none	15–30 mgm qhs
Long Acting			
Diazepam	20–70	yes	5 mgm tid
Clonazepam	18–50	none	0.25 mgm tid

* for hypnotic use

** quoties hora somni

lorazepam have no active metabolites and can be best utilized. Alprazolam's metabolites are relatively inactive and thus alprazolam can be utilized in such patients. Alprazolam has a half life of 4 to 6 hours. Many medical patients are not able to take medication orally. Use of parental medication is complicated both because of the pain due to an injection and the difficulties of intravenous benzodiazepine use due to respiratory depression. Thus sublingual administration of benzodiazepines such as alprazolam is often indicated in the medically ill or surgically compromised. Utilization of 0.25 to 0.5 mg. sublingually allows rapid onset of symptom reduction. The half life of this agent is four to six hours and due to minimal clinical activity of its metabolites does not seriously accumulate in patients with compromised liver function. Other benzodiazepines may be utilized if oral administration is possible. Side effects include sedation and respiratory depression when such medicines are given intravenously. The side effects of drowsiness and motor incoordination can foster unsteadiness in elderly patients and increase the risk of falls from beds. The clinician, however, should carefully avoid utilizing a benzodiazepine for antianxiety medications concurrently with a sedative hypnotic. Such polypharmacy often promotes uneven blood levels and periods of anxiety due to brief withdrawal phenomena due to the irregular blood level of the benzodiazepine. The clinician must also beware of drug-drug interactions between benzodiazepines and other drugs. For example, cimetidine may increase diazepam level due to competitive inhibition of its metabolites.¹⁵ Thus both anxiety and panic respond to such benzodiazepine administration. Patients who are substance abusers may also abuse such medicines when discharged from hospital.

Depression

Depression is demarcated from anxiety in that it is a painful feeling state that is characterized by anguish over a prior loss and thus is focused upon the past where as anxiety fearfully infers future events. Depression in medical patients is commonly undetected and is quite prevalent in seriously ill medical patients.¹⁶ The categorical varieties of depression include adjustment reactions with depressed moods, major mood disorders that are a single episode or recurrent and a depressed state in a bipolar disorder. Depression can result from organic phenomena and are best labeled organic mood states. As with anxiety, depression can be due to medications or disease states. Medications such as reserpine or antihypertensives can cause depression, while Addison's disease, pancreatic cancer or hypothyroidism may present as a mood disorder.¹⁷

Once the clinician has ruled out organic causes of depression, both cognitive behavioral strategies and

psychopharmacology are appropriate. It is essential for the physician to understand why the patient feels depressed. Depression consists of a variety of feelings that include guilt over past deeds; shame due to a sense of inadequacy; hopelessness that one is not measuring up to an idealized role; or helplessness that the environment is abandoning the patient. Asking the patient why they think they developed their disease will often reveal ideas about guilt and shame. This is the first step in proper evaluation and treatment of depression and demoralization. Discussions need to better document why the patient is so depressed from an ideational standpoint and what distortions can be rectified. Directly asking about the patient's understanding of the disease process and treatment can highlight the patient's misconceptions and distortions that can be clarified and corrected.

The cognitive behavioral strategy most commonly used in treating the medically ill is that of "reframing." Specifically a patient will tend to receive a diagnosis as being an imminent death sentence whereas the reality is that the condition is often chronic and the patient can look forward to a quantity of life that may be reasonable and a quality of life that is adequate.

The psychopharmacologic management of depression is complicated by the fact that antidepressant medication often takes 2 to 6 weeks to have full onset. Thus in the demoralized and depressed medically ill patient use of psychostimulants is effective.¹⁸ Methylphenidate, 5–10 mg., given twice a day can be very effective within 1 to 2 days. The dosage should be given in the morning and at noon to prevent compromised sleeping. For patients that cannot take medication orally, Pemoline given in the same schedule from 18–37.5 mg. daily can be chewed and well absorbed through the oral mucosa. Such medication is extremely useful for the apathetic demoralized anorexic patient who is very medically ill.¹⁹ The medication can be utilized tricyclic medication can be given concurrently and its onset of action eventually developing.

Insomnia

Insomnia in the medically ill is also quite common.²⁰ Insomnia may be subjective or objective and can be secondary to anxiety or depression or a primary complaint.²¹ New surroundings of the hospital, noisy conditions, unusual smells and medications foster sleep disorders. Polyuria can keep patient awake throughout the night. Pain upon movement or orthopnea also interfere with sleep. Patients in traction who cannot lie in their usual manner do not sleep well. Finally many routinely prescribed medications can cause insomnia. Prednisone, antihypertensives and bronchodilators inhibit sleep. Medical patients are often on a variety of medications and the clinician must be aware of polypharmacy before

managing sleep disorders in the medically ill. Nonpharmacological treatments include ascertaining environmental factors that are keeping the patient awake as well as instituting proper sleep hygiene. Sleep hygiene involves avoiding caffeine-containing foods or intellectually invigorating activities prior to sleep should be considered. Avoiding daytime naps can also foster a proper sleep-wake cycle. Attention to medications that promote insomnia is essential. Use of benzodiazepines as sedative hypnotics are effective short-term agents to improve subjective sleep quality and prolong objective sleep time. It is essential to avoid using a variety of benzodiazepines concurrently because of pharmacokinetic problems due to various half lives.²² Sedative hypnotic agents can be partitioned into long acting, mid acting and short acting agents.²³ The long acting agents such as flurazepam may produce daytime sedation and foster daytime napping. Temazepam, a mid acting agents, is slowly absorbed from the gastrointestinal tract and should be given a few hours before sleep is desired. Finally, short acting hypnotics such as triazolam, effectively induces sleep in a relatively short time but due to its rapid onset of action may allow early awakening. Clinicians should match the patient's needs and responses to the proper sedative hypnotic. Sedating antidepressants such as trazodone can also be effective in promoting restorative sleep. Finally, it is imperative that the clinician assess the presence of anxiety or depression in patients with sleep complaints. Often insomnia is secondary to a primary psychiatric disorder which must be directly managed.

Conclusion

Anxiety, depression and insomnia are painful conditions that are common in the medically ill. Proper diagnosis and treatment will ameliorate suffering and improve both morbidity and mortality. Remembering that such disorders may be treatable reactions to an illness, a psychiatric disorder itself, or a component of an underlying medical disease will alert the clinician to better identify these problems.

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