



# Dealing with depression and medical illness

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## Summary

**Depressive illness in the presence of medical illness is common and the relationship between them is complex. Often the medical illness can cause the depression. However, in some illnesses depression may be the primary presentation. Depression in medically ill patients may be difficult to diagnose. The assessment of both conditions and the interaction between them is critical in managing these patients. A review of the medical disorder and the patient's medications is important. Psychotherapy may be sufficient to treat mild depression. However, for more severe depression antidepressants may be required, or referral to a psychiatrist. The patient and their family are likely to need long-term support.**

Key words: antidepressant drugs, cognitive behaviour therapy, drug interactions.

*(Aust Prescr 2007;30:86–8)*

## Introduction

Depressive illness in patients with medical illness is common and has extensive implications for the patient and their family, and the treating doctor. The co-occurrence of these disorders

results in amplification of suffering, increased morbidity and mortality, prolonged hospital stays and increased utilisation of healthcare services.

Unfortunately, the diagnosis of depression in the presence of medical illness is frequently missed, often resulting in unnecessary investigations and procedures, increased disability and increased costs to the community. The main issues in dealing with depression in this context are making an accurate diagnosis, teasing out the complexity of the interaction between the depression and the medical illness and establishing an appropriate management plan that addresses both problems and the interactions between them.

## The extent of the problem

Rates of depression vary with the nature of the medical disorder. The most common associations are found in neurological, cardiovascular, endocrine and oncological illnesses, but can occur in almost any disorder. It has been reported that around 30% of patients attending a neurological clinic had significant symptoms of depressive illness and in up to 72% of these patients the depression was unrecognised by the physician.<sup>1</sup> The prevalence of depression following acute ischaemic heart disease may be as high as 30% and the risk persists for 12 months following myocardial infarction. After stroke the prevalence of depression may be as high as 31% at three months.<sup>2</sup> In cancer patients after the diagnosis, the risk of depression is as high as 55%.

Comorbid depression has been suggested to increase the death rate of the underlying illness by as much as 4.3 times regardless of whether the patient was previously healthy or not.<sup>3</sup> In haemodialysis patients, depression predicted mortality after adjusting for age, gender, race, medical comorbidity and several biochemical markers.<sup>4</sup> Depression was also found to be a significant predictor of cardiac mortality in patients with recent myocardial infarction.<sup>5</sup> There is some evidence that treating depression in cardiac patients following myocardial infarction or those with unstable angina may reduce subsequent cardiac events.<sup>6</sup> This may be due to antiplatelet aggregation effects that have so far been documented following treatment with the selective serotonin reuptake inhibitors sertraline, paroxetine and escitalopram.<sup>7,8</sup>

Compared with non-depressed patients, those with comorbid depression have increased mortality, prolonged length of hospital stay and greater number of days in hospital on follow-up.<sup>9</sup>

## In this issue...

Thanks to some of the interventions described by Andrew McCann the outlook for patients with coronary occlusion has improved. Survivors may, however, become depressed and James Olver and Graham Burrows say that depression often co-exists with medical illness. If antidepressants are prescribed they may cause the patient unexpected consequences such as the dental problems discussed by Michael Page and Luke Somerville-Brown.

Osteonecrosis of the jaws is another example of a drug treatment causing a dental problem. Alastair Goss and Patricia Backhouse describe this uncommon adverse effect of bisphosphonates.

## The relationship between depression and medical illness

The association between depression and medical disorders is complex. The depressive illness may be a consequence of the medical illness or may be a primary issue. For example, depressive symptoms frequently present in Parkinson's disease, stroke, space-occupying lesions of the central nervous system, and endocrinopathies such as Cushing's syndrome and thyroid disorders. Depressive symptoms may precede the onset of some disorders including hypothyroidism, ischaemic heart disease and stroke and may even contribute to their causation through alterations in platelet adhesion and immunological changes.

The exact biological mechanisms by which these illnesses may cause depression are yet to be determined. However, reduced dopamine availability has been suggested in illnesses such as Parkinson's disease. Destruction of central nervous system pathways have been implicated in depression, especially in patients with central nervous system lesions. Hormonal modulation of central monoamine receptors may explain some depression in the endocrinopathies.

Finally, the association between depression and medical illness may be explained by factors that can lead to both disorders. For example, stress and substance abuse may lead to the development of stress-related and substance-related medical disorders and depression.

## Making the diagnosis

A careful history of the onset, course and severity of the depressive symptoms is required. This may help tease out whether the depression is primary or secondary and also the relationship between the severity of physical symptoms of illness and degree of depression. Risk factors, such as those for suicidality, should always be assessed.

Appropriate investigations (for example thyroid, blood, liver and renal function screen and neuroimaging) are needed to exclude an organic cause of depression and to assess the status of the medical illness. Specific metabolic investigations may be needed depending on the medical disorder, for example calcium concentrations in patients with metastatic cancer.

Depression in medically ill patients may be overlooked by the busy medical practitioner. This is partly due to the 'understandability' of the depressive symptoms and the dominance of the physical presentation of the disorder. However, the constellation of the depressive symptoms may also be difficult to recognise in the presence of a major medical disorder.

Depressive symptoms can be grouped into biological (e.g. sleep, appetite), psychological (e.g. preoccupations with guilt, failure) and social (e.g. withdrawal, loss of role). Psychologically-based

symptoms such as dissatisfaction, a sense of failure, feeling the illness was punishment, suicidal thoughts, crying and loss of social interest in family and friends are the most discriminating symptoms of depression in medically ill patients.<sup>10</sup> When sleep disturbance is unexplained by the medical disorder and is accompanied by ruminatory thoughts of guilt, failure and hopelessness, it may also help in the diagnosis. This is also true for unexplained weight loss.

The diagnosis may be complicated by substance abuse.

Depression and substance abuse may frequently coexist and contribute to the expression of either disorder. Alcohol, cannabis and amphetamines have been directly implicated in the cause of depression.

## Managing the medical illness

A review of the medical disorder is important. This may include minimising unnecessary medication and maximising the treatment of the medical condition. Rehabilitation approaches

to chronic problems such as pain, neurological disorders, arthritis and some cancers should be considered. It can be helpful to give advice regarding a healthy lifestyle including diet, sleeping habits, substance misuse and regular exercise within the constraints of the medical

problem. Improvements in the individual's functioning can have considerable benefit in terms of self-esteem and mood.

## Managing the depression

Although optimising the management of the medical illness may improve the patient's mood, the depression may still require specific management. This includes psychotherapeutic techniques and antidepressant medications.

When the symptoms are mild to moderate, psychotherapy is indicated. Cognitive behaviour therapy is often well suited for these patients. Standard elements may include challenging negative thinking and catastrophisation, relaxation techniques, behavioural scheduling which may include regular exercise and socialisation and problem solving techniques.

When the depressive disorder is moderate to severe, medications may be required. Older tricyclic antidepressants and monoamine oxidase inhibitors should be avoided as first-line drugs since they may interact and worsen the underlying medical disorder due to anticholinergic, anti-adrenergic and cardiac effects. As many patients will be on multiple medications for their underlying physical disorder, care should be taken to avoid drug interactions. In order to counter altered metabolism and minimise adverse effects, medications should be started at low doses and adjusted slowly.

When the depression is severe with suicidal ideation or the interaction with the medical disorder is complex, referral to a psychiatrist may be indicated. Electroconvulsive therapy (ECT) can be used when the depression is severe. However,

Depression in medically ill patients may be overlooked

caution is required and ECT is contraindicated in patients with uncontrolled hypertension or raised intracranial pressure.

In all cases, frequent liaison with other professionals involved with the management of the patient is essential. In some disorders such as chronic pain, the interactions between illness and depression are so complex the patient is best managed in a multidisciplinary rehabilitation program where physician, psychiatrists, psychologists and physical therapists meet regularly and address the issues in a co-ordinated approach. Changes to the Medicare Benefits Schedule may make it easier for patients to access these services.

## Patient support

As with all therapeutic interactions, and in particular when they are complex and likely to be prolonged as in the case of comorbid depression with medical illness, a good rapport with the patient and their family is essential. This will begin with education of the patient and their family about both the medical disorder and the depressive disorder. Often there are negative judgments from family members who may be critical of the patient for not trying or using the symptoms to avoid the usual responsibilities of their role. On the other hand, some families may perpetuate disability and not encourage the patient to maximise their capacity. The patient and their family are likely to need a prolonged period of support which may be best supplied with regular appointments.

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*Conflict of interest: none declared*

## Self-test questions

*The following statements are either true or false (answers on page 111)*

1. Dothiepin is the first treatment of choice for patients with comorbid depression and medical illness.
2. Unexplained weight loss and sleep disturbance should not be considered signs of depression in medically ill patients.

## Letters

Letters, which may not necessarily be published in full, should be restricted to not more than 250 words. When relevant, comment on the letter is sought from the author. Due to production schedules, it is normally not possible to publish letters received in response to material appearing in a particular issue earlier than the second or third subsequent issue.

### Generic medicines

Editor, –The article, 'Frequently asked questions about generic medicines' (Aust Prescr 2007;30:41–3), provides a clear and useful précis of some of the key issues that can impact on the decision to substitute an equivalent generic medicine.

However, the question of whether or not to substitute a medicine with a narrow therapeutic index with a

bioequivalent generic remains open to debate. Perhaps the prescriber and pharmacist could approach this decision with more confidence if we consider the criteria used to define the term narrow therapeutic index, or more correctly narrow therapeutic ratio, by regulatory agencies.

The US code of federal regulations (Part 320.33(c) – Bioavailability and bioequivalence requirements) defines a medicine displaying a narrow therapeutic ratio as follows: