Clinical Review

Depression: The Great Imitator in Family Practice

Reuben B. Widmer, MD, and Remi J. Cadoret, MD lowa City, Iowa

Psychiatric problems, especially depression, are common in primary care and can usually be treated successfully by family physicians if the diagnosis is made. Unfortunately, there is as yet no simple, definitive test for detecting depression. Family physicians must be aware that depression is very often masked by somatic or anxiety complaints. A pattern of increased office visits, with a constellation of varied functional somatic complaints, perhaps accompanied by disturbances in social relationships, often indicates the presence of a developing depression. Although hospitalization or psychiatric referral or both are in order for complex psychiatric diagnoses or for suicidal patients, the morbidity and the mortality of depression can be reduced by the alert family physician who provides both carefully managed antidepressant treatment and supportive therapy early in the course of the illness.

Psychiatric disorders are commonly encountered in primary care. In one British study, Shepherd et al¹ found an incidence of 140/1,000 persons at risk in London, with the rate for men at 9.8 percent and for women at 17.5 percent. The authors concluded: "These figures place psychiatric illness among the commoner causes of consultation in general practice."

Studies from the United States support the ubiquity of psychiatric problems in primary care. Significant numbers of persons with psychological disorders seek care first from their family physician, with the result that "neurosis" is the fourth most common reason for medical office visits among the general population.² Primary care practitioners exclusively treat 60 percent of all persons with mental disorders and share the

treatment of an additional 7 percent with mental health specialists.³ These patients make up between 17 percent and 48 percent of the total seen in sampled practices.⁴⁻⁶ Depression accounts for a major portion of this group, being second only to marital problems in frequency.⁷ The experience of one of the authors (RBW) showed that the most frequent complaints given by patients in his family practice were based on psychiatric problems, especially anxiety (5.2 percent) and depression (3.9 percent).

Obviously, depression of one type or another is common in those presenting for primary care. Some of the reasons for this will become apparent as the definition, epidemiology, and natural history of depression are outlined.

Definition

Depression is a complex group of conditions that manifest similar syndromes. Etiology, course of illness, and response to treatment are varied depending on the type of depression. The most

From the Department of Family Practice and the Department of Psychiatry, University of Iowa, Iowa City, Iowa. Requests for reprints should be addressed to Dr. Remi J. Cadoret, Department of Psychiatry, University of Iowa, 500 Newton Road, Iowa City, IA 52242.

recent authoritative description of the depressive syndrome is the definition of major depression in the DSM-III diagnostic scheme (Appendix).8

Several clinically important and distinct illnesses contain the component of major depression. First, and most common, is that of *unipolar depressive illness*, characterized by episode(s) of depression only. This illness occurs more frequently in women (approximately a two-to-one sex ratio of female to male) and can strike an individual at any age between 15 (rarely earlier) and 70 years, with an average age of onset in the late thirties or early forties. Like most conditions involving a major depressive syndrome, unipolar illness is episodic and tends to remit spontaneously after an average of five to six months' duration, although recurrences later are common, and some individuals develop a chronic depression.

The second, and more rare, condition involving major depression as a component is *bipolar or manic-depressive* illness, in which patients suffer from episodes of both mania and depression. Persons with this condition usually have more frequent episodes than do unipolar depressives. Men and women are more equally affected, and the average age of onset is younger. Spontaneous remission is the rule in bipolar illness, but youth at onset and high frequency of episodes are more likely to lead to considerable social and career turmoil.

Occurrence

Studies of depressed patients in primary care show that the overwhelming majority of patients suffer from unipolar illness. Conclusions about depression in primary care, however, must be tempered by the limitations of case findings in medical practice.

Unfortunately, most epidemiologic studies among medical practices have chosen physician diagnosis as the method of case finding. The magnitude of the problem is thus vastly underestimated, for in studies in which those patients identified as depressed by a standardized diagnostic scale are compared with those diagnosed by physicians, experienced physicians miss as many as one third of the cases and resident physicians miss as many as two thirds to three fourths of the cases. ¹⁰ Even for many of those diagnosed, several visits to the physician may be required before the depression is detected. ^{6,9,11} The detection of psy-

chiatric problems is especially difficult when the patient fails to complain spontaneously about the problem ("I am depressed"), or when the psychiatric conditions masquerade as a physical illness ("I feel nauseated all the time").

Natural History and Etiology

Although major depression, whether unipolar or bipolar, tends to remit spontaneously, a number of severe complications are possible. First and foremost is suicide. In a number of series of individuals suffering from a major depressive disorder, the lifetime rate of suicide approximated 15 percent. Most studies of completed suicide show that the majority of patients had visited a general practitioner shortly before their suicide but that relatively few had received specific treatment for the depression. ¹²

Social relations, including work, marriage, and family, are also drastically affected by a major depression. Dysfunction at work (or in school) results in complications such as quitting jobs, being fired, dropping courses at school, or initiating unnecessary career changes. Marital problems may be the first indication of a developing depression. Irritability, loss of interest in previously enjoyable activities, fatigue, and dysphoric mood place a heavy burden on the marriage relationship, giving rise to increasing marital conflict and even divorce. In more than 50 percent of divorces studied by Briscoe et al,13 one of the spouses was depressed before divorce proceedings started. The adjustment (grief) reaction following divorce is a well-known entity, but depression as a contributing cause of divorce gives the family physician another reason to diagnose and treat this illness early.

Particularly relevant to primary care is the tendency of depression to be masked by somatic symptoms. The depressed patient's somatic complaints have been described in the psychiatric literature for many years. Recently Widmer and Cadoret^{9,14} described a syndrome of increased visits and increased number of functional somatic complaints months before the family physician made the diagnosis of depression. This pattern has been reported in two additional family practices. ^{15,16} Recent studies of depressed patients in other cultures show high frequencies of somatic symptoms as part of the depression. ¹⁷ In Western cultures, Continued on page 495

when patients are stricken with the somatic symptoms of depression, they often seek the diagnostic and curative powers of their primary physician. As a consequence of the plethora of somatic complaints in depressed patients, diagnostic procedures and hospitalizations (usually for diagnostic studies) increase markedly.14-16 In many patients the presenting somatic complaints disappear, only to be replaced by new and different ones. Finally. after weeks or months of search for organic pathology, the depression is recognized and treated. In almost all cases no organic pathology accounts for the symptoms, but treatment with antidepressant medications reduces the number of functional somatic complaints to the level found in patients who are not depressed. 18

The imitation of somatic illness does not stop with the first depression. In a study of patients who had more than one depression, the mode of presentation for subsequent depressions was markedly similar: increased visits to the physician and increased somatic complaints, again leading to delays in the diagnosis and definitive treatment of the depression. 14 However, the pattern of somatic symptoms presaging subsequent depressions bore little relationship to the type of somatic symptoms ushering in the index episode. Patients who complained of "stomach pains" the first time they were depressed might present with "neck pain" in a subsequent depression. This lack of consistency of type of somatic complaint from one depression to another is another contributor to the reputation of depression as a great imitator. Indeed, dramatic changes in somatic symptoms can occur within a single episode of depression (for example, low back pain for several months, succeeded by several months of nausea and indigestion).

A large but undetermined number of depressions in primary care occur in individuals with severe or life-threatening medical illnesses. An obvious example is the depression that almost invariably follows a myocardial infarction. Other less common situations, such as terminal carcinomas or illnesses (eg, chronic obstructive pulmonary disease) in which mobility is extremely limited and discomfort is high, are often associated with depression. In these instances treatment of the depression with medication may be difficult because of adverse side effects of antidepressants

on physiologic functions. Because the overdose of tricyclic antidepressants can be cardiotoxic, their use has been considered potentially unsafe in patients with heart disease. Recent studies would prove this fear unfounded. Veith et al 19 described a double-blind study in which depressed patients with known heart disease were treated with doxepin, imipramine, or placebo. The antidepressants had no effect on the left ventricular ejection fraction at rest or during maximal exercise. Premature ventricular contractions were reduced by imipramine but not consistently changed by doxepin or placebo. There was a significant improvement in standard depression rating scores among the patients on antidepressants.

Another large number of depressions in primary care occurs in individuals with other pre-existing psychiatric conditions. The most common is probably depression in alcoholism. Here, even more than in unipolar depressive illness, diagnosis of the pre-existing psychiatric conditions is often overlooked. Studies have shown that alcoholics are at special risk for suicide, which tends to follow shortly after major social upheavals such as divorce or separation from spouse.20 The relationship of depression in the alcoholic to subsequent suicide has not been clearly demonstrated, however. In situations in which another psychiatric illness is present and precedes a depression, assessment and treatment of the pre-existing psychiatric condition should be attempted. An area of confusion is the relationship between anxiety and depression. Widmer and Cadoret9 found a high incidence of anxiety complaints up to seven months before the diagnosis of depression was made in a family practice. Noyes et al21 and Clancy et al22 found a 44 percent occurrence of depression in a group of patients with anxiety neurosis. Dealy et al23 noted that 64.5 percent of patients with panic attacks were also depressed. The overlapping of anxiety and depressive symptoms in the same patient makes for a difficult differential diagnosis. A diagnosis of anxiety or depression usually depends on which symptoms are most bothersome at the time of the interview. This situation often calls for consultation with a psychiatrist.

One other common condition in primary care is associated with a depressive syndrome: the grief reaction. The primary care physician has an un-

Continued from page 495

fulfilled role in the treatment of grieving family members of his patients who die. Clayton²⁴ has shown prospectively that depressions are extremely common within the year following the death of a close loved one. Although the family physician may prescribe a sedative for grieving relatives during the initial period of bereavement, the same physician is rarely consulted months later when a grief reaction still saps the will and strength of the survivor. In part, the reluctance to consult a physician for a grief reaction arises from the commonly held belief that grief is natural and so must be borne. However, antidepressant medication combined with thoughtful counseling can ameliorate the depressive symptoms of a protracted grief reaction.

Depression in primary care may also occur as a side effect of various medications. The depression and anergia occurring in some who take propranolol is only one example. There are many other drugs, varying from birth control pills to antihypertensive medications, that also cause depression. An awareness of a drug-induced cause of depression is extremely important because of a potential heavy use of all kinds of potent medications.

Diagnosis

Obviously, it is important for family physicians to arrive at an early and definitive diagnosis of depression. There is strong support for the development of an accurate self-administered health questionnaire suitable for the general population, as well as for the clinic population.²⁵ Goldberg²⁶ has developed a simple, self-administered paperand-pencil test designed to detect depression and anxiety in patients at a primary care physician's office. The specificity and the sensitivity of this test, the General Health Ouestionnaire-28 (GHO-28), have also been validated by Goldberg and Hillier.²⁷ Highly satisfactory specificity and sensitivity have been reported, making the test attractive to use clinically. The GHQ-28 is strictly a screening tool for psychiatric illness, and a more definitive diagnosis of depression must be sought by other means. It is too soon yet to gauge the value in family practice of such recent developments as the dexamethasone suppression test.28 In this test certain depressed patients who have been given a small night-time dose of dexamethasone fail to suppress their cortisol production at varied times during the next day. The specificity and sensitivity of the test in detecting depression remain to be determined. Clearly, however, a reliable chemical test pointing to depression would be a great boon in clinical practice.

At present the diagnosis must be made based on historical evidence and observations of the patient's mood, activity, and so on. The classic symptoms of depression (Appendix) are easily recognized by friends, family, and physicians. The diagnostic problem occurs when the patient does not present with a low mood or with any of the psychological symptoms listed in the Appendix. This apparent lack of symptoms does not mean that they are not present; rather, the psychological symptoms may be camouflaged by anxiety and somatic complaints (most commonly sleep disorder, fatigue, dizziness, gastrointestinal complaints, and dietary and weight changes). Katon et al^{29,30} reviewed the relationship of depression and somatization as found in the literature. The socially acceptable excuses for disability are somatic complaints based on real or possibly real organic disease. The psychological complaints of depression, such as low mood, poor concentration, guilt feelings, and so on, are not so readily accepted by family, employer or society in the Western culture. In children the most frequently noted indicators of illness are irritability, listlessness, crankiness, and apathy. Some children get the message that talking about emotions is unacceptable, and thus they may fail to learn the difference between mood states and physical symptoms. Physical symptoms may therefore become the legitimate way to ask for help from friends, family, and the medical profession. The physician who is aware that depression may present in this way is able to save his patient much pain and suffering as well as conserve health dollars.

Consider depression in the differential diagnosis when a constellation of complaints by a patient does not fit any disease syndrome. A few screening questions about the patient's sleeping patterns, energy for the day's activities, and appetite changes leading to weight gain or loss can open the way to more definitive questions. The apparent reluctance of patients to submit to questions about their mental health is often a reflection of the physician's own discomfort with this line of question-Continued on page 503

Continued from page 498

ing. Patients generally expect and accept physiological questions from their physician. Positive answers to the questions about physiological functions that are usually altered during depression can lead to questions about the enjoyment of usual activities (work, social contacts, sports, and sex). the ability to concentrate (reading, studying, watching television), and the ambition to start projects. From here the physician can proceed to questions about irritability and agitation or retardation, self-reproach or guilt, outlook for the future, and finally death wishes or suicidal ideation. If the patient is depressed, he will be less hesitant to answer the questions than most physicians are to ask them. In fact, many patients are relieved that someone finally understands how bad they feel.

Management

The next hurdle many physicians fear is telling the patient he is depressed. True, some patients have difficulty in accepting the diagnosis. In such cases the physician can list the symptoms just elicited and then tell the patient, "The illness you have is the result of changes in the chemicals that transport messages between nerve endings. Most people with this problem feel blue and depressed, so it has a name. It is called depression." Few patients will object to the conclusion that a depression is present if it can explain why they have somatic and pain symptoms.

Most depressions encountered in primary care can be managed successfully with antidepressant medication combined with supportive psychotherapy for the patient and the family. Supportive therapy for the patient also includes a great deal of education about the nature of the depression and how it affects the patient's social relations, work, and outlook. Above all, the element of hope for a cure should be offered.

Part of the management of depression should include a family group meeting. It is especially important to include the spouse of a depressed patient. The family group meeting provides an opportunity for the family to learn about the nature of depression and why the involved member is so different and difficult while ill as well as an opportunity for the family members to air their resentments and develop better lines of communications. Doherty and Baird³¹ have studied the inter-

action of physician, patient, and family members during an illness. They found that even though the physician-patient relationship is primarily a one-to-one relationship, the family physician must take into account the attitude of family members toward the physician as well as their attitudes toward the illness and the patient.

Two errors family physicians frequently make in treating depressed patients are prescribing antidepressant drug dosage that is too low and discontinuing the medication too soon. Table 1 lists the antidepressants available and the dosage usually used for ambulatory patients. The decision to choose a particular antidepressant is usually based on the side effects of that particular drug. The available antidepressant drugs are equally efficacious, but their side effects are different (Table 1). It is wise to start patients on a low dosage and work up to a therapeutic dosage in a few days or as the patient tolerates it. Since elderly patients have a lower tolerance, their starting dose should be lower and increments should be smaller and spread over a longer period. Physicians should advise their patients that it takes three to four weeks to get full effect from the medication and inform them when to expect results and side effects. Patients should stay on medication for six to nine months before tapering off. If symptoms return, the medication can be increased for three additional months and then be tapered again.

Approximately 30 percent of depressed patients treated with tricyclic antidepressants show little or no response even though they are receiving recommended dosages.32 Monitoring plasma levels in such patients could be clearly advantageous. Low plasma levels might suggest rapid metabolism, poor absorption, or a compliance problem. High plasma concentrations suggest there are problems with tissue response to the drug or the dose may be above the therapeutic range. After poor compliance is ruled out in the case of low plasma levels, the dosage might be increased while plasma concentrations are carefully observed. In the case of high plasma levels, lower doses can be tried because the poor results may be due to levels above the therapeutic range.

There is still considerable research in progress to determine the optimal therapeutic range for tricyclic antidepressant plasma levels. These are the tentative therapeutic ranges for imipramine (greater than 150 ng/mL), amitriptyline (greater

Table 1. Antidepressant Medications						
Antidepressant	Sedation	Anti- cholinergic Effect	Orthostatic Effect	Gastro- intestinal Upset	Special Diet Needed	Usual Daily Dosage in Outpatients
Amitriptyline	+++	++++	++++	0	0	50-200 mg
Imipramine	++	++	++	0	0	50-200 mg
Doxepin	++++	+++	+++	0	0	75-300 mg
Nortriptyline	+++	+++	0	0	0	50-150 mg
Desipramine	+	+	0	0	0	50-200 mg
Protriptyline	0	++	+	0	0	10-10 mg
Trimipramine	+++	?	?	0	0	75-200 mg
Trazodone	+++	?	0	+	0	50-600 mg
Maprotiline	++	+	++	0	0	50-200 mg
Amoxapine	+++	+	++	0	0	100-300 mg
Monoamine oxidase						3
inhibitors	+	++	++	0	++++	
Parnate						10-30 mg
Nardil						45-75 mg
Marplan						20-50 mg
Lithium carbonate	0	0	+	+++	0	600-1,200 m

than 160 ng/mL), and nortriptyline (50 to 150 ng/mL). A number of laboratory techniques being used are generally limited to research laboratories, but they offer the potential for an inexpensive routine method for the measurement of plasma tricyclic antidepressant levels.

The patient who does not respond at all or who responds only partially to therapy should be referred to a familiar and trusted psychiatrist. Hospitalization or referral is in order for patients who have a complicating psychiatric diagnosis (mania) or who are suicidal. Consultation is always in order for those family physicians who are uncomfortable with taking care of patients with psychiatric disorders.

Conclusions

The data from three studies by the authors^{9,14,15} indicate that patients who are developing depression visit their family physician more frequently than do nondepressed controls, presenting with increased somatic and anxiety complaints that often result in increased hospital admissions. These complaints camouflage the underlying psychiatric disease. An awareness by family physicians that psychological complaints may be absent can save their patients much discomfort and expense by an early diagnosis and treatment. A decrease in morbidity and mortality is possible when family physicians, aware of the nature of depression, its prognosis, and how it presents in the primary care office, initiate effective treatment with antidepressant medication and psychosocial support.

References

1. Shepherd M, Cooper B, Brown AC, Kalton GW: Psychiatric Illness in General Practice. London, Oxford University Press, 1966, pp 76-94

2. National ambulatory medical care survey: 1977 summary. In National Center for Health Statistics (Hyattsville, MD): Vital and Health Statistics, series 13, No. 44. DHEW publication No. (PHS) 80-1795, Government Printing

Office, 1980
3. Brown BS, Regier DA: How NIMH now views the primary care practitioner. Practical Psychol Physicians 4:12, 1977

4. Hesbacher P, Rickels K, Rial WY, et al: Psychotropic drug prescription in family practice. Compr Psychiatry 17: 60, 1976

5. Justin RG: Incidence of depression in one family physician's practice. J Fam Pract 3:438, 19766. Locke BZ, Gardner EA: Psychiatric disorders among

the patients of general practitioners and internists. Public Health 84:167, 1969

7. Werkman SL, Mallory L, Harris J: The common psychiatric problems in family practice. Psychosomatics 17: 119, 1976

8. Diagnostic and Statistical Manual of Mental Disorders (DSM-III), ed 3. Washington, DC, American Psychiatric

Association, 1980, pp 213-214

9. Widmer RB, Cadoret RJ: Depression in primary care: Changes in pattern of patient visits and complaints during a developing depression. J Fam Pract 7:293, 1978

10. Moore TJ, Silimperi DR, Bobula JA: Recognition of depression by family medicine residents: The impact of screening. J Fam Pract 7:509, 1978

11. Dyker GS: Epidemiology of depression in general practice. J Intern Med Res 3:1, 1975

12. Barraclough B, Bunch J, Nelson B: A hundred cases

of suicide: Clinical aspects. Br J Psychiatry 125:355, 1974

13. Briscoe CW, Smith JB, Robins E, et al: Divorce and psychiatric disease. Arch Gen Psychiatry 29:119, 1973

14. Widmer RB, Cadoret RJ: Depression in family prac-

tice: Changes in patterns of patient visits and complaints during subsequent developing depression. J Fam Pract 9: 1017, 1979

15. Cadoret RJ, Widmer RB, Troughton EP: Somatic complaints: Harbinger of depression in primary care. J Af-

fect Dis 2:61, 1980

16. Wilson D, Cadoret RJ, Widmer RB, Judiesch K: Somatic symptoms: A major feature of depression in a family practice. J Affect Dis, in press

17. Kleinman A: Culture and patient care: Psychiatry among the Chinese. Drug Ther 11:134, 1981
18. Cadoret RJ, Widmer RB, North CS: Depression in family practice: Long-term prognosis and somatic com-plaints. J Fam Pract 10:625, 1980 19. Veith RC, Murray RA, Caldwell JH, et al: Cardiovas-

cular effects of tricyclic antidepressants in depressed patients with chronic heart disease. N Engl J Med 306:954,

1982

20. Murphy GE, Armstrong J, Hermele S, et al: Suicide and alcoholism. Interpersonal loss confirmed as a predictor. Arch Gen Psychiatry 36:65, 1979

21. Noyes R Jr, Clancy J, Hoenk Pr, et al: The prognosis of anxiety neurosis. Arch Gen Psychiatry 37:173, 1980

22. Clancy J, Noyes R Jr, Hoenk PR, et al: Secondary

depression in anxiety neurosis. J Nerv Ment Dis 166:846, 1978

23. Dealy RS, Ishiki DM, Avery DH, et al: Secondary depression in anxiety disorders. Compr Psychiatry 22:612,

24. Clayton PJ: Bereavement. In Paykel ES (ed): The Handbook of Affective Disorders. New York, Guilford Press, 1982, pp 403-415 25. Caplan G: Principles of Preventive Psychiatry. New

York, Basic Books, 1964, pp 89-112 26. Goldberg D: The Detection of Psychiatric Illness by Means of a Questionnaire. London, Oxford University Press, 1972

27. Goldberg DP, Hillier VF: A scaled version of the General Health Questionnaire. Psychol Med 9:139, 1979

28. Carroll BJ, Fernberg M, Greden J, et al: A specific laboratory test for the diagnosis of melancholia. Arch Gen Psychiatry 38:15, 1981 29. Katon W, Kleinman A, Rosen G: Depression and

somatization: A review, part 1. Am J Med 72:127, 1982

30. Katon W, Kleinman A, Rosen G: Depression and somatization: A review, part 2. Am J Med 72:241, 1982

31. Doherty WJ, Baird MA: Family Therapy and Family Medicine: Toward the Primary Care of Families. New York, Guilford Press, 1983

32. Amsterdam J, Brunswick D, Mendels J: The clinical application of tricyclic antidepressant pharmacokinetics and plasma levels. Am J Psychiatry 137:653, 1980

APPENDIX Diagnostic Criteria for Major Depressive Episode*

- A. Dysphoric mood or loss of interest or pleasure in all or almost all usual activities and pastimes. The dysphoric mood is characterized by symptoms such as the following: depressed, sad, blue, hopeless, low, down in the dumps, irritable. The mood disturbance must be prominent and relatively persistent, but not necessarily the most dominant symptom, and does not include momentary shifts from one dysphoric mood to another dysphoric mood, eg, anxiety to depression to anger, such as those seen in states of acute psychotic turmoil. (For children under six years, dysphoric mood may have to be inferred from a persistently sad facial expression.)
- B. At least four of the following symptoms have each been present nearly every day for a period of at least two weeks (in children under six years, at least three of the first four):
 - 1. Poor appetite or significant weight loss (when not dieting) or increased appetite or significant weight gain (in children under six years, consider failure to make expected weight gains)

2. Insomnia or hypersomnia

- 3. Psychomotor agitation or retardation (but not merely subjective feelings of restlessness or being slowed down) (in children under six years, hypoactivity)
- 4. Loss of interest or pleasure in usual activities, or decrease in sexual drive not limited to a period when delusional or hallucinating (in children under six years, signs of apathy)

5. Loss of energy; fatigue

- 6. Feelings of worthlessness, self-reproach, or excessive or inappropriate guilt (either may be delusional)
- 7. Complaints or evidence of diminished ability to think or concentrate, such as slowed thinking, or indecisiveness not associated with marked loosening of associations or incoherence

8. Recurrent thoughts of death, suicidal ideation, wishes to be dead, or suicide attempt

- C. Neither of the following dominates the clinical picture when an affective syndrome is absent (ie, symptoms in criteria A and B above):
 - 1. Preoccupation with a mood-incongruent delusion or hallucination

2. Bizarre behavior

- D. The symptoms are not superimposed on schizophrenia, a schizophreniform disorder, or a paranoid disorder
- E. The symptoms are not due to any organic mental disorder or uncomplicated bereavement

^{*}Source: Diagnostic and Statistical Manual of Mental Disorders⁸