Psychological factors affecting other medical conditions: Clinical features, assessment, and diagnosis

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INTRODUCTION

Psychological factors affecting other medical conditions (PFAOMC) is a disorder that is diagnosed when a general medical condition is adversely affected by psychological or behavioral factors; the factors may precipitate or exacerbate the medical condition, interfere with treatment, or contribute to morbidity and mortality [1]. In addition, the factors are not part of another mental disorder (eg, unipolar major depression).

Virtually all medical illnesses are potentially affected by psychological and behavioral factors (as well as social and environmental factors, such as employment status, poverty, relationships, and neighborhood). Variation in how patients respond to medical illnesses and hospitalization appears to be due at least in part to psychological factors [2]. Hippocrates wrote that "It is more important to know what sort of person has a disease than what sort of disease a person has" [3].

PFAOMC emphasizes one causal direction in the interactions between mind and body, that is, the effects of psychological factors on general medical conditions. In most patients with medical conditions, there are also effects in the other direction (ie, medical illnesses affect psychological function).

This topic reviews the epidemiology, pathogenesis, clinical features, assessment, diagnosis, and differential diagnosis of PFAOMC. Management of PFAOMC is discussed separately. (See

"Psychological factors affecting other medical conditions: Management".)

EPIDEMIOLOGY

The prevalence of psychological factors affecting other medical conditions (PFAOMC) is not clear because the disorder describes many possible interactions between a wide range of psychological traits, states, and behaviors, and the full range of general medical diseases. The prevalence may be large:

- Nonadherence to treatment is one feature of PFAOMC and several studies have found large nonadherence rates [4], even for cardiovascular disease and posttransplant immune suppression [5]. As an example:
  - One review found that among patients hospitalized for acute myocardial infarction, medication nonadherence within the first month after discharge occurred in approximately 25 to 33 percent [6].
  - A meta-analysis pooled medication nonadherence (failure to fill the initial prescription) rates from 24 studies that included more than 550,000 prescriptions for depression, diabetes, hyperlipidemia, and hypertension; the rate of nonadherence in these chronic medical conditions was 15 percent [7]. In addition, nonadherence was two times greater in patients from North America than Europe (17.0 and 8.5 percent).
- A study of general medical patients (n >1500) found that irritability in the absence of any mental disorder was present in 27 percent [8]. A comparable study (n >800 general medical patients) found that demoralization in the absence of major depression was present in 21 percent [9].
- In United States private insurance billing data, PFAOMC is a more common diagnosis than conversion disorder and other somatic symptom disorders [10].

Psychological factors affecting other medical conditions can occur at any point in the lifespan [1].

PATHOGENESIS

Psychological and behavioral factors can affect general medical illnesses in many ways, such as:

- Promoting known risks for medical illness, including smoking, substance abuse, overuse of analgesics, sedentary lifestyle, poor diet, obesity, poor sleep hygiene, and unsafe sex
- Influencing how patients respond to their symptoms, including whether and how they seek care
- Effects upon the physician-patient relationship and the physician's diagnostic and treatment decisions
- Reducing compliance with diagnostic recommendations, treatment, and lifestyle change
- Interfering with rehabilitation through lack of motivation and poor tolerance of pain and frustration

  Many of the adverse effects of psychological factors upon medical illness may be amplified by social factors, including marital stress, poor social support, job strain, and disadvantaged socioeconomic status.

In addition, psychological factors can directly affect pathophysiology. As an example, stress has been experimentally shown to cause myocardial ischemia in patients with coronary heart disease [11]. In addition, stress and depression are associated with several adverse effects upon the immune system, including poorer antibody response to vaccines, decreased control of latent viruses, and worse wound healing [12,13]. Psychopathology is also associated with disruptions in homeostasis, including sleep architecture, other circadian rhythms, and endocrine function [14].

CLINICAL FEATURES

The essential feature of psychological factors affecting other medical conditions (PFAOMC) is the presence of psychological factors (eg, distress) or behaviors (eg, maladaptive health behaviors such as nonadherence with assessments) that adversely affect a general medical symptom or disorder [1]. The factors can:

- Constitute a risk factor for the medical disorder (eg, smoking among patients with coronary heart disease or overeating in diabetes)
- Influence the underlying pathophysiology of the medical illness (eg, marital conflict leads to angina in patients with coronary heart disease or to bronchospasm in asthma)

- Adversely affect either the course of illness or treatment (eg, anxiety that exacerbates asthma, or neglecting doses of insulin to lose weight)

The adverse effects of PFAOMC include increased risk for suffering, disability, or death [1]. These effects can develop acutely (eg, stress-induced cardiomyopathy) (see "Clinical manifestations and diagnosis of stress (takotsubo) cardiomyopathy") or chronically (eg, time urgency, impatience, or hostility leading to hypertension).

Psychological and behavioral factors can potentially affect virtually all general medical conditions, including illnesses with well-established pathophysiology (eg, coronary heart disease, cancer, or diabetes), functional syndromes (eg, migraine, irritable bowel syndrome, or fibromyalgia), or symptoms (eg, pain, fatigue, or dizziness) [1].

Type of psychological factors — Many different types of psychological factors can affect general medical illnesses [1]:

- Regression
- Anxiety
- Depression
- Denial
- Anger
- Other

Regression — Regression is a partial or complete return to immature patterns of behavior, including dependency upon others. It is common for medically ill patients to regress and seek comfort, care, and release from their responsibilities.

Regression varies across a spectrum and in moderation is adaptive, because sick patients must give up some control and accept dependency upon others. This level of regression may evoke positive emotions in clinicians, such as feeling capable and needed [2]. However, more pronounced regression is problematic; it is difficult to care for patients who have minimal tolerance for frustration, pain, or being alone; or are infantile, needy, continuously whining, and easily upset. Like young infants, some regressed patients are constantly making requests of clinicians and other caregivers. These patients avoid responsibility for their care and complain about its inadequacy. Other regressed patients excessively need to control their medical care; they may insist that care is provided in a specific manner, and they tend to be perfectionistic and intolerant of any (perceived or real) errors or delays in care. Regression can also take the form of entitlement, in which patients demand attention and are oblivious to the needs of other patients.

Patients who seem too comfortable in a regressed state have often received significant secondary gain during previous illnesses. Secondary gain is an external motivation for behavior. As an example, during a traumatic childhood with emotionally or physically absent or abusive parents, the care of clinicians may have been among the only experiences of nurturance and kindness received by a child. Now as an adult patient, the individual may unconsciously yearn to re-create this experience and thus regress.

Anxiety — Anxiety occurs along a continuum that includes normal reactions as well as anxiety disorders, and can potentially affect the course and treatment of medical illness. Different patients react with widely varying concerns to the same diagnosis, prognosis, treatment, and complications. Clinicians may become desensitized to patients' experiences of serious illness and lose sight of what constitutes normal anxiety reactions.

Fear of death is frequent in the medically ill, but not necessarily in proportion to the severity of disease. Many other factors may magnify or diminish this fear (eg, previous losses, religious beliefs, personality, intractable pain, and previous treatment experiences, including witnessing other patients' deaths). For some patients with minor illness, the fear of death can be troubling; for other patients, with severe or even terminal illness, the fear of death may be less important than other fears.

Other common forms of anxiety experienced by medically ill patients include separation anxiety (eg, fear of being alone in the hospital), fear of strangers (eg, difficulty trusting new clinicians), fear of injury to or losing control of bodily functions (eg, blindness, incontinence, or paralysis), fear of losing body parts (amputation), fear of pain, fear of losing one's social role and function (eg, career or family), fear of dependency upon others, and fear of closeness (eg, in paranoid patients). Patients may be aware of some fears but unaware of others.

In most diseases, some degree of anxiety is expected and adaptive because it puts the patient on alert. However, even normal anxiety may occasionally have adverse effects. As an example, immediately after an acute myocardial infarction, anxiety-associated increases in heart rate and blood pressure may be dangerous and require treatment [15]. Anxiety symptoms may also aggravate asthma [16] and are associated with poorer behavioral management of diabetes and poorer glycemic control [17].

Too little anxiety makes one vulnerable to minimizing the risks of disease and need for treatment. However, in some cases the apparent absence of anxiety is misleading, because the patient may be extremely anxious without conscious awareness of it, using defenses like denial (see 'Denial' below) to avoid feeling overwhelmed.

Anxiety symptoms and disorders may adversely affect the course of illness in general medical disorders. A meta-analysis of seven prospective observational studies (n >6700 patients with coronary artery disease), which adjusted for potential confounding factors (eg, age or history of smoking or diabetes), found that a one standard deviation increase in anxiety rating scale scores was associated with a 21 percent increase in poor outcomes (eg, mortality, myocardial infarction, or stroke) [18]. In addition, a prospective study followed patients with myocardial infarction (n >1900) for up to three years found; after adjusting for potential confounding factors (eg, age, body mass index, and prior general medical history), the analyses found that among patients with the highest level of anxiety, all-cause mortality was 78 percent higher [19].

Too much anxiety can also lead to functional impairment and poor adherence to diagnostic tests or treatment (eg, "I can't bear to get a mammogram because I'm afraid it might find something"). Medical care is often disrupted by common health-related phobias, including fear of:

- Needles
- Blood
- Dentists
- Being put to sleep

Anxiety can also amplify perception of pain and other aversive sensations.

Depression — Depression in the context of PFAOMC refers to depressed mood (dysphoria) or other depressive symptoms (table 1), rather than a full syndrome or mental disorder (eg, unipolar major depression). Dysphoria can take the form of sadness, emptiness, hopelessness, demoralization, grief, or irritability. Different definitions of the term "depression" are discussed separately. (See "Unipolar depression in adults: Assessment and diagnosis", section on 'Definitions of depression'.)

Depressive symptoms are associated with onset of general medical conditions and poor outcomes in these conditions:

- **Coronary heart disease** – Many studies have demonstrated that depression is an independent risk factor for incident coronary heart disease [20], as well as poor outcomes in coronary heart disease, including recurrent coronary events, impaired functioning, poorer quality of life, and mortality [21,22]. Information about depression following myocardial infarction is discussed separately. (See "Psychosocial factors in acute coronary syndrome", section on 'Depression after acute coronary syndrome'.)

- **Stroke** – A prospective community study (n >6000 individuals followed for up to 22 years) found that after adjusting for potential confounding factors (eg, age, blood pressure, body mass index, and smoking status), increasing levels of depression at baseline were associated with an increased risk of subsequent stroke [23]. In addition, a national registry study of patients with stroke (n >150,000) found that during two years post-stroke, depression occurred in 25 percent; after controlling for potential confounding factors (eg, age, sex, and general medical comorbidities), the analyses found that all-cause mortality was 89 percent greater in patients with post-stroke depression than nondepressed stroke patients [24]. Additional information about depression in stroke patients is discussed separately. (See "Complications of stroke: An overview", section on 'Depression'.)

- **Diabetes** – The number of depressive symptoms is related to the number of diabetic symptoms (eg, coldness, numbness or pain in the hands and feet; polyuria; and abnormal thirst) [25], and depressive syndromes are associated with increased rates of hyperglycemia, diabetic complications, and mortality [26,27]. As an example, a prospective observational study followed patients with type 2 diabetes mellitus for up to three years, and found that after adjusting for potential confounding factors (eg, age, sex, obesity, smoking, and hemoglobin A1C), death was more likely to occur in patients with minor depression (n >300) than nondepressed patients (n >3300) (14 versus 8 percent) [28]. In a cross-sectional study of patients with type 2 diabetes (n >700), those who were depressed were more likely to smoke, be overweight/obese, and/or have worse glycemic control than patients who were not depressed [29].

- **End stage renal disease** – Hospitalization and mortality are greater in patients with end stage renal disease who are depressed, compared with patients who are not depressed [30-32]. As an example, a prospective observational study of a nationally representative sample of hemodialysis patients (n >5000) found that the risk of death was 40 percent greater in depressed patients than nondepressed patients (relative risk 1.4, 95% CI 1.2-1.6) [33]. Additional information about depression in end stage renal disease is discussed separately. (See "Psychiatric illness in adults receiving maintenance dialysis", section on 'Major depression'.)

- **Rheumatoid arthritis** – Among patients with rheumatoid arthritis, depressive symptoms are associated with increased pain, fatigue, and disability [34]. In addition, depression is an independent risk factor for mortality [35]. Additional information about depression in rheumatoid arthritis is discussed separately. (See "Overview of the systemic and nonarticular manifestations of rheumatoid arthritis", section on 'Constitutional/systemic symptoms'.)

In the face of disease and disability, patients frequently feel dejected, discouraged, and helpless. When sadness becomes too great and demoralization occurs, maladaptive behaviors may ensue; depressed patients are at increased risk for nonadherence with medical treatment, smoking, substance abuse, a sedentary lifestyle, unsafe sex, and poor nutrition. Nonadherent depressed patients may appear to be passively suicidal (eg, transplant patients who deliberately miss doses of maintenance immunosuppressive drugs). Depression can amplify perception of pain and other aversive sensations.

Denial — Denial is conceptualized as a defense mechanism (see 'Other' below) that reduces anxiety by blocking conscious awareness of thoughts, feelings, or facts that are unwanted and threaten to overwhelm the patient [2]. (Suppression is the conscious avoidance of upsetting knowledge.) Although denial of a general medical disease may be a symptom of a psychiatric disorder (eg, schizophrenia), denial also occurs in the absence of psychiatric syndromes.

Denial occurs often in major medical illnesses, particularly among individuals who deny other life stressors, such as marital problems. In addition, denial is frequent in patients who poorly tolerate dependency associated with medical illness, and for whom the sick role is inconsistent with how they think of themselves.

The extent of denial in patients with general medical conditions varies. Patients may deny any illness at all, or acknowledge the symptoms but deny the particular diagnosis (usually displacing it to a more benign organ system, such as interpreting angina as indigestion), or accept the diagnosis but deny the need for treatment and lifestyle change.

Severe denial, in which patients refuse to accept obvious symptoms and signs of a disease, is a defense against overwhelming fear, if no other evidence of major psychopathology (eg, paranoid delusions) is present. Extreme denial of a general medical illness may distort the perception of reality, reach psychotic proportions, and appear comparable to the gross impairment in reality testing that occurs in psychotic disorders (eg, schizophrenia or delusional disorder) [2]. However, extreme denial in psychological factors affecting other medical conditions is not regarded as a psychotic phenomenon.

Denial of a medical illness is not always pathologic [36,37]; the adaptive value varies, depending upon the nature or stage of the illness. Excessive denial may delay diagnosis, result in nonadherence with medications and rehabilitation plans, and lead patients to ignore modifiable risk factors. However, maintaining some degree of denial in the initial response to a grave diagnosis or complication helps patients to adjust to the bad news and continue functioning without feeling overwhelmed by the full awareness of the implications of their disease.

Although denial of early cancer can be maladaptive if patients delay seeking necessary treatment, denial of untreatable metastatic cancer may enhance quality of life before death [2].

In addition, moderate denial during treatment for acute coronary syndromes may be adaptive by reducing anxiety without preventing the patient from cooperating with clinical care. A prospective observational study of patients hospitalized for unstable angina (n = 48) found that episodes of angina occurred less often in patients with higher levels of denial compared to patients with lower levels (1 versus 3 episodes per day), and that medical stabilization occurred in more patients with higher levels of denial than lower levels (92 versus 65 percent) [38].

Insufficient denial may also be harmful. Too little denial may leave the patient so afraid of disability and death that invalidism develops.

Anger — Anger and hostility can adversely affect general medical disorders through behavioral mechanisms (eg, increasing disease risk factors) and through autonomic physiologic changes. Studies have found that anger is associated with:

- Early age at onset of smoking, as well as smoking daily, heavy smoking, and nicotine dependence [39,40]
- Increased heart rate and cortisol stress responses [41], and sleep disturbances [42]
- Deterioration of the doctor-patient relationship [43]
- Poorer adherence to treatment [44]
- Increased risk of hypertension [45], peptic ulcer [46], and acute and chronic pain that is more intense and disabling [47,48]
- Increased cardiac events (eg, arrhythmia, myocardial infarction, or coronary heart disease mortality) among initially healthy populations and in patients with existing coronary heart disease [49-52]

Other — Other psychological factors that can affect general medical conditions include:

- **Posttraumatic stress disorder** – Posttraumatic stress disorder (PTSD) can lead to medication nonadherence in patients with chronic medical conditions. A meta-analysis of 16 studies (n >4000 patients) found that among patients with conditions such as the human immunodeficiency virus, cardiovascular disease, or stroke, medication nonadherence was greater in patients with PTSD than those without PTSD (odds ratio 1.2, 95% CI 1.1-1.4) [53]. In addition, nonadherence was twice as likely in the subgroup with

PTSD induced by a medical event, compared to patients without PTSD (2.08, 95% CI 1.03-4.18).

- **Personality traits** – Personality traits exist on a continuum with personality disorders, and patients typically display multiple traits. The stress of general medical conditions and hospitalization can exacerbate traits to the point that they are problematic. Examples of traits include [1,2,54]:

  - Dependent – Needy, unable to solve problems, demanding, and continually asking for help and comfort
  - Obsessional – Fastidious, orderly, controlling, self-righteous, and emphasizing rationality
  - Histrionic – Attention seeking, seductive, emotionally shallow, and melodramatic
  - Narcissistic – Vain, arrogant, entitled, and demanding
  - Paranoid – Suspicious of others, excessively sensitive to perceived slights, and unforgiving
  - Schizoid – Detached from others, as well as restricted and flat affect
  - Martyr-like – Patients present themselves as always the victim and sacrificing themselves for others

  Additional information about personality traits is discussed separately. (See "Overview of personality disorders", section on 'Clinical manifestations' and "Approaches to the therapeutic relationship in patients with personality disorders".)

- **Attachment (relationship) style** – Attachment (relationship) styles can be categorized based upon whether one has a positive or negative view of oneself, as well as positive or negative expectations of others [2]. In addition, the manner in which patients with general medical disorders relate to others may affect course of illness. As an example, a prospective observational study followed nondepressed patients with type 1 or type 2 diabetes mellitus (n >3500) for up to five years; patients were classified as independent if they were less inclined to seek social support, and as interactive if they were more inclined to seek support [55]. After adjusting for potential confounding sociodemographic and clinical factors, the risk of death was greater in patients with an independent attachment style than interactive style (hazard ratio 1.20, 95% CI 1.01-1.43).

- **Coping style** – Coping styles (behaviors) for managing the stress of medical illnesses include [2,54]:
  - Hostile or aggressive actions to change the situation
  - Distancing oneself psychologically from the situation
  - Avoidance
  - Self-control of one's actions or feelings
  - Seeking social support
  - Accepting responsibility
  - Viewing the situation positively
  - Problem solving

  Most patients use multiple strategies to cope with complex stressful situations.

  Patients with medical illnesses who make greater use of problem solving (task-oriented coping) may have better outcomes. A prospective study followed patients hospitalized with acute coronary syndrome for an average of five years and found that the risk of subsequent major cardiac events (eg, myocardial infarction or cardiovascular death) was lower in patients who reported higher task-oriented coping (hazard ratio 0.3, 95% CI 0.1-0.7) [56]. Problem-focused coping may promote better medication adherence, increased physical activity, healthier diets, and improved management of stressors.

- **Defense mechanisms** – Defense mechanisms (table 2) are conceptualized as intrapsychic unconscious processes that patients use to defend themselves and confront anxiety and conflict, preserve self-esteem, and maintain a sense of control. Defense mechanisms are discussed separately. (See 'Regression' above and 'Denial' above and "Unipolar depression in adults: Psychodynamic psychotherapy", section on 'Defense mechanisms'.)

Course of illness — The course of illness in patients with psychological factors affecting other medical conditions is highly variable due to the wide range of potential psychological factors affecting different general medical disorders, as well as variability in the severity of the factors. Psychological factors may have minor or major influence at one particular point, multiple discreet times, or throughout the course of a general medical illness.

Outcomes of general medical conditions are typically poorer for patients who are psychologically distressed, compared with patients with the same medical disorders without psychological distress [1]. Several studies have documented that psychiatric problems in medical patients are associated with increases in medical symptoms and length of hospital stay [57].

ASSESSMENT

When to suspect the disorder — For general medical illnesses that do not respond as expected to standard treatments, physicians should consider whether psychological factors may be responsible. However, premature attribution to psychological factors may lead clinicians to overlook a medical explanation for "treatment-resistant disease" and unfairly blame the patient. One example is the brittle diabetic adolescent with labile blood glucose levels and frequent episodes of ketoacidosis, despite efforts by the physician to improve diabetic management. The difficulty in controlling the illness is often attributed to the patients and their dislike of lifestyle restrictions, tendency to rebel against feeling controlled by others, denial of vulnerability, and wish to be "normal." In many adolescent (and some adult) diabetic patients, these psychological issues undermine management through nonadherence with medication, diet, follow-up visits, and activity limitations, as well as substance abuse. Also, some female patients with body image problems may skip insulin doses as a way to lose weight. Nevertheless, difficulty in achieving stable glucose control in diabetic adolescents is often the result of hormonal lability rather than psychological factors.

Initial evaluation — For patients with a possible diagnosis of psychological factors affecting other medical conditions, clinicians should assess psychological traits and states, and their effects upon the patient's health behaviors and course of illness. This is important when patients appear to be having difficulty coping with diseases and their treatments, including poor adherence.

Identifying psychological factors begins with screening questions. For patients who screen positive, clinicians should obtain additional history. An empathic approach is essential. Examples of screening questions are as follows:

- **Regression and dependency** – Regressed patients are typically not aware that they are unusually needy; thus, we suggest clinicians ask themselves whether the patient needs excessive reassurance, excessively depends upon others (eg, nurses), or poorly tolerates frustration or pain. Although clinicians can ask patients, "Do you need more reassurance than other people?" many regressed patients will answer no.

- **Anxiety** – "Are you often bothered by feeling nervous or worrying too much?" "Do you usually have trouble relaxing?"
- **Depression** – "Are you often been bothered by feeling down, depressed, or hopeless?" "Do you often have little interest or pleasure in doing things?"
- **Denial** – "How much do you worry about your illness?" Responses such as "Not at all" suggest denial; by contrast, a response such as "All the time" suggests anxiety.
- **Anger** – "Does your temper often get the best of you?" "Do you often find yourself tense, annoyed, or frustrated with other people?"

It is also helpful to ask patients how they have coped with previous stressful situations, because they are likely to use the same strategies in the present [2].

DIAGNOSIS

Diagnostic criteria — We suggest diagnosing psychological factors affecting other medical conditions (PFAOMC) according to the criteria in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) [1]:

- A general medical symptom or disorder is present.
- Psychological or behavioral factors negatively affect the medical condition in one or more of the following ways:
  - The factors pose additional health risks for the patient. As an example, a 45 year old male executive smokes and drinks despite his physician's warnings ("It's the only way I can cope with my job and family").
  - The factors aggravate the underlying pathophysiology of a medical condition and precipitate or exacerbate symptoms. As an example, angina occurs in the male executive after marital arguments marked by anger, yelling, and throwing things; this autonomic arousal precipitates angina.
  - The factors affect the course of the medical condition, as manifested by a close temporal relationship between the factors and the onset or exacerbation of (or delayed recovery from) the medical condition. As an example, a previously healthy 45 year old male reports chest pain that only occurs when he loses his temper and yells at his assistant, wife, and children. A Holter monitor shows signs of ischemia and premature

ventricular contractions while yelling, and a stress test and cardiac catheterization confirm a diagnosis of coronary artery disease. The temporal link between anger and angina supports a diagnosis of PFAOMC.

- The factors disrupt treatment of the general medical condition, including not seeking medical care, nonadherence with follow-up visits or prescribed treatment, or maladaptive modifications of treatment by the patient or family. As an example, denying the need for evaluation of radiating, exertional left sided chest pain.

- Other mental disorders (eg, major depression or panic disorder) do not better explain the psychological or behavioral factors. As an example, patients with agoraphobia who do not leave the house to seek medical care are not given a second diagnosis of PFAOMC.

The close temporal relationship between abnormal psychological or behavioral factors with a general medical illness is not sufficient to diagnose PFAOMC; there must also be at least some evidence that the factors exert a clinically significant adverse effect upon the illness [1].

DSM-5 specifies the severity of PFAOMC as follows [1]:

- Mild – Increases medical risk (eg, intermittent nonadherence with hypertension medications)

- Moderate – Exacerbates general medical condition (eg, anxiety worsens asthma)

- Severe – Causes emergency department visit or hospitalization

- Extreme – Is life threatening (eg, ignoring myocardial infarction symptoms)

The diagnosis of PFAOMC is recorded together with the diagnosis for the relevant general medical condition.

The World Health Organization's International Classification of Diseases-11th Revision (ICD-11) includes the diagnosis “psychological and behavioral factors affecting disorders or diseases classified elsewhere” [58], which is comparable to the DSM-5 diagnosis of PFAOMC. Psychological and behavioral factors affecting disorders or diseases classified elsewhere (in ICD-11) applies to patients with psychological or behavioral factors that adversely affect the manifestation, treatment, or course of a general medical disorder (eg, asthma, gastric ulcer, or ulcerative colitis). There are six specific subtypes of psychological and behavioral factors: mental disorder, psychological symptom, personality trait or coping style, maladaptive health behavior, or a stress-related physiological response that adversely affects the general medical condition. The diagnosis of psychological and behavioral factors affecting disorders or diseases classified

elsewhere is made only when the psychological factors increase the risk of suffering, disability, or death and are a focus of clinical attention. In addition, the diagnosis is recorded together with the diagnosis for the relevant medical condition.

Classification — In DSM-5, PFAOMC is classified among the group of disorders called somatic symptom and related disorders [1]. Other disorders in this group include conversion disorder, factitious disorder, illness anxiety disorder, and somatic symptom disorder. Additional information about somatic symptom and related disorders is discussed separately. (See "Somatic symptom disorder: Assessment and diagnosis", section on 'Terminology and DSM-5'.)

DIFFERENTIAL DIAGNOSIS

Symptoms of psychological factors affecting other medical conditions (PFAOMC) can overlap with symptoms of other psychiatric disorders.

Adjustment disorder — If a general medical disorder leads to psychological distress or behavioral symptoms, the correct diagnosis is adjustment disorder [1]. However, if psychological or behavioral symptoms exacerbate a general medical disorder, the diagnosis is PFAOMC. As an example, patients with asthma that leads to maladaptive anticipatory anxiety are diagnosed with adjustment disorder with anxiety, whereas patients with asthma attacks that are precipitated by anxiety are diagnosed with PFAOMC.

Both directions of influence are operative in many patients, that is, the patient's emotional state aggravates and is aggravated by the medical disorder. In these cases, PFAOMC and adjustment disorder are both diagnosed.

Conversion disorder — Neurological symptoms can occur in conversion disorder (functional neurological symptom disorder) and PFAOMC [1]. The two disorders are frequently distinguished in that conversion disorder is characterized by symptoms that are incompatible with recognized neurologic or other general medical disorders, whereas patients with PFAOMC have a recognized medical disorder. In practice, the distinction is sometimes difficult because patients may have both conversion disorder and a neurologic disorder with similar symptoms. As an example, patients with seizures regularly precipitated by emotional stress might have epilepsy aggravated by stress (ie, PFAOMC), psychogenic nonepileptic seizures (conversion disorder), or both.

Additional information about diagnosing conversion disorder is discussed separately. (See "Functional neurological symptom disorder (conversion disorder) in adults: Terminology, diagnosis, and differential diagnosis".)

Illness anxiety disorder — Illness anxiety disorder and PFAOMC can both present with anxiety about health [1]. Unlike PFAOMC, the chief clinical concern in illness anxiety disorder is excessive anxiety and preoccupation with having or acquiring a serious general medical illness; somatic symptoms are minimal or nonexistent and no serious medical illness is present. Although anxiety may be present in PFAOMC, the chief clinical concern in PFAOMC is the adverse effect of anxiety upon the medical condition; in addition, a diagnosed medical condition is also present and the anxiety is less distressing and disabling than in illness anxiety disorder.

Additional information about diagnosing illness anxiety disorder is discussed separately. (See "Illness anxiety disorder: Epidemiology, clinical presentation, assessment, and diagnosis", section on 'Diagnosis'.)

Mental disorder due to another medical condition — Mental disorders due to another medical condition and PFAOMC are both characterized by the close temporal association between psychiatric symptoms and a general medical condition [1]. In mental disorders due to another medical condition, the mental symptoms are judged to be the direct result of the physiologic effects of the medical condition (eg, depressive symptoms caused by hypothyroidism). By contrast, the presumed causality is in the opposite direction in PFAOMC, such that psychological or behavioral factors adversely affect a general medical condition.

Somatic symptom disorder — Somatic symptoms, psychological stress, and maladaptive health behaviors can occur in both somatic symptom disorder and PFAOMC [1,59]. However, in somatic symptom disorder, the somatic symptoms are the focus of excessive or maladaptive thoughts, feelings, or behaviors; in PFAOMC, the patient's thoughts, feelings, or behaviors are not necessarily excessive. In addition, the somatic symptoms in somatic symptom disorder may not be medically explained, whereas a diagnosable general medical disorder is always present in PFAOMC.

The distinction between the two disorders is often not clear cut; rather the difference is one of emphasis. Somatic symptom disorder emphasizes the disproportionate and persistently abnormal thoughts, feelings, and/or behaviors centered upon the physical symptoms (eg, patients with angina worry continuously that they will have a heart attack, measure their blood pressure multiple times each day, and unnecessarily limit their activity). By contrast, PFAOMC emphasizes that psychological factors adversely affect the course and outcome of the medical condition (eg, angina is precipitated by anxiety).

Additional information about diagnosing somatic symptom disorder is discussed separately. (See "Somatic symptom disorder: Assessment and diagnosis", section on 'Diagnosis'.)

SUMMARY

- The prevalence of psychological factors affecting other medical conditions (PFAOMC) is not clear, but may be large. (See 'Epidemiology' above.)
- Psychological and behavioral factors can affect general medical illnesses in many ways, such as promoting known risks for medical illness, influencing how patients respond to their symptoms, effects upon the physician-patient relationship, reducing adherence, as well as effects upon pathophysiology. (See 'Pathogenesis' above.)
- The essential feature of PFAOMC is the presence of a general medical symptom or disorder that is adversely affected by psychological factors, including regression, anxiety, depression, denial, and anger. Other factors include personality traits, attachment (relationship) style, coping style, and defense mechanisms (table 2). (See 'Clinical features' above.)
- Physicians should consider whether psychological factors may be responsible when general medical illnesses do not respond as expected to standard treatments. However, premature attribution to psychological factors may lead clinicians to overlook a medical explanation for “treatment-resistant disease” and unfairly blame the patient. Identifying psychological factors begins with screening questions. (See 'Assessment' above.)
- The diagnosis of PFAOMC requires each of the following criteria:
  - A general medical symptom or disorder is present
  - Psychological or behavioral factors negatively affect the medical condition in one or more of the following ways, such that the factors:
    - Pose additional health risks for the patient
    - Aggravate the underlying pathophysiology of a medical condition and precipitate or exacerbate symptoms
    - Affect the course of the medical condition, as manifested by a close temporal relationship between the factors and the onset or exacerbation of the medical condition
    - Disrupt treatment of the general medical condition
  - Other mental disorders do not better explain the psychological or behavioral factors

(See 'Diagnosis' above.)

- The differential diagnosis of PFAOMC includes adjustment disorder, conversion disorder, illness anxiety disorder, mental disorder due to another medical condition, somatic symptom disorder. (See 'Differential diagnosis' above.)

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