Substance-induced disorders and medical illness presenting with anxiety symptoms need to be considered before the diagnosis of any anxiety disorder can be made. There is no lab test or imaging study that definitively makes a psychiatric diagnosis. The physician is reliant upon her clinical judgment and index of suspicion to distinguish between anxiety disorders and the medical problems that mimic them. Pollard and Lewis suggest the following guidelines. A medical or substance induced cause of anxiety is more likely when the first presentation is after age 40, there is fluctuation in the level of consciousness, or there is evidence of autonomic instability. An anxiety disorder is more likely when the patient is concerned about losing control, has a family history of anxiety problems, first presents between ages 18 and 45, has a recent or anticipated life event, or has agoraphobia.

**Substance Abuse**

When evaluating a patient for anxiety, it is important to take a good substance abuse history. Substances causing anxiety may be over the counter, prescription, or illegal. These include ephedrine and pseudoephedrine, nicotine, caffeine, cocaine, and 3,4-methylenedioxymethamphetamine (MDMA or ecstasy). An increasing number of women are taking herbal supplements that have side effects such as nervousness and insomnia. These include St. John's wort, ephedra (ma huang), and ginseng (Avila 1999). Withdrawal of alcohol, opiates or benzodiazepines should also be considered. Patients who take alprazolam, a short acting benzodiazepine, to treat anxiety may have withdrawal symptoms between doses. Caffeine is a very commonly ingested substance and somatic manifestations of caffeinism are similar to symptoms of anxiety disorders. These include diuresis, insomnia, withdrawal headache, diarrhea,
anxiety, tachycardia, and tremulousness (Victor 1981). Clinical experience shows that some women take methylphenidate prescribed to their children for appetite suppression, depression, and decreased concentration.

While substances may cause anxiety, women with anxiety disorders commonly have comorbid substance abuse. In one study, women with alcohol disorders were two to three times more likely than other women to have depression or any anxiety disorder (Brady 1999). One study of people with cocaine dependence found anxiety disorders to be twice as prevalent in women as in men (Rounsaville 1991).

Cardiac
Supraventricular tachycardia (SVT) has many clinical similarities to panic disorder. One retrospective study by Lessmeier and Gamperling surveyed 107 patients with known SVT in an electrophysiology office. In this cohort, 88% experienced four or more symptoms of panic and 67% fulfilled the DSM-IV criteria for panic disorder. The diagnosis of SVT was initially unrecognized in 55% and remained so for a median of 3.3 years. Before the SVT was discovered, women were about twice as likely as men to carry the diagnosis of panic or anxiety. This study also found that an event monitor was much more likely than a Holter monitor to make the diagnosis. Anxiety symptoms resolved in 86% after appropriate treatment for SVT. Other cardiac problems that may present with anxiety symptoms include myocardial infarction (MI), coronary insufficiency, congestive heart failure, and anemia. Evidence suggests that patients with MI and lactic acidosis may have a catecholamine release from the locus ceruleus causing feelings of anxiety (Gallerani 1995).

Pulmonary
While asthma attacks and panic attacks share many of the same symptoms, it is usually possible to distinguish between the two by history. One study found that when wheezing, coughing and mucous production were present, asthma is the
most likely diagnosis (sensitivity of >90%, specificity of >70%). However, it can be more challenging to diagnose anxiety disorders in patients with known asthma or chronic obstructive pulmonary disease. Panic is more common in these patients than in normal controls (Perna 1997). Co-occurrence of untreated panic and obstructive lung disease leads to more frequent use of as needed medications and steroids, more hospital admissions, and longer hospital stays (Carr 1999).

**Endocrine**

Perhaps the most well known medical mimic of anxiety disorders is hyperthyroidism. The epidemiology and symptomatology of both disorders are similar. Women are ten times more likely than men to have hyperthyroidism, and the disease is most common at ages 30-40 (Wallis 1998). It is reasonable to check a screening TSH on all patients who present with symptoms of anxiety. Menopause is another common cause of insomnia, fatigue, and irritability. A careful history is required to differentiate hot flashes and other symptoms of menopause from anxiety disorders.

Pheochromocytoma causes catecholamine release and may be misdiagnosed as anxiety (Starkman 1990). Clues pointing to pheochromocytoma include hypertension, abdominal pain, and anxiety that is refractory to treatment. Hypertension can be persistent or present only during a catecholamine surge. Therefore, between attacks, the physician may see evidence of the long-term consequences of hypertension, such as retinopathy and congestive heart failure, in the absence of elevated blood pressure (Archer 1999).

Consider congenital adrenal hyperplasia (CAH) in women with anxiety that also have hirsuitism, infertility, and irregular menses. CAH is an autosomal recessive deficiency of steroidogenic enzymes that is present in 1% of the population. This disorder causes accumulation of dehydroepiandosterone (DHEAS), an antagonist of the gamma-aminobutyric acid A (GABA-A) receptor in the brain,
leading to potent anxiogenic effects. One study looked at twelve patients with refractory anxiety disorders and CAH. Anxiety levels decreased by 55% after appropriate treatment for CAH (Jacobs 1999).

Other medical conditions to consider include hypoglycemia, which is seen most commonly in patients on diabetes medication. Hypercalcemia and hypocalcemia of an abnormal parathyroid gland may present with anxiety and irritability. Also consider Addison’s disease, Cushing’s syndrome, pulmonary embolus, temporal lobe epilepsy, vertigo and carcinoid when evaluating a patient with unexplained anxiety symptoms.

Bibliography


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