

PANIC ATTACKS: A NEUROLOGICAL PERSPECTIVE

Panic attack/disorder is one of the most common clinical conditions which remains under-diagnosed and not optimally managed.

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Professor Van der Meyden was a neurologist from 1975 to 1998, when he was in full-time academic medicine. From 1999 to 2003 he was in private practice. He has been with MEDUNSA from 2004 to date.

Panic disorder results in high use of medical services, impaired social and work life and overall reduced quality of life. Furthermore, the potential stigma of being diagnosed with a psychological or psychiatric condition may have a negative impact on the preferred treatment modality and help-seeking behaviour.

Panic attacks were seen frequently (339 subjects, 6%), among a group of neurology patients (5 243) seen in a private practice (February 1999 - December 2003, C H van der Meyden). Asymmetrical sensory and motor symptoms were found in 14% of the patients with panic attacks. Headache (34%) and transient disturbances of consciousness (27%) were the most common presenting conditions in patients who had had panic attacks. These neurological presentations can lead to misdiagnosis and overinvestigation of panic disorder, so it is important to be aware of how common panic disorder is and what the symptoms are.

Panic attacks are episodes of sudden, unexpected, overwhelming, apparently senseless terror accompanied by a variety of physical (autonomic), cognitive (psychological) and behavioural symptoms, which together form a characteristic recognisable syndrome.

DIAGNOSTIC CRITERIA FOR A PANIC ATTACK

A panic attack is a discrete period of intense fear or discomfort, in which four (or more) of the following symptoms develop abruptly and reach a peak within 10 minutes:

- palpitations, pounding heart, or accelerated heart rate
- sweating
- trembling or shaking

- sensations of shortness of breath or smothering
- feeling of choking
- chest pain or discomfort
- nausea or abdominal distress
- feeling dizzy, unsteady, lightheaded, or faint
- derealisation (feelings of unreality) or depersonalisation (being detached from oneself)
- fear of losing control or going crazy
- fear of dying
- paraesthesias (numbness or tingling sensations)
- chills or hot flushes.

An attack typically lasts from 5 to 30 minutes, with the symptoms peaking at about 10 minutes, but attacks have been reported to last for hours.

There is a lifetime prevalence of panic attacks of 3.6% of the adult population, leading to impairment in perceived physical and emotional health, and in occupational and financial functioning, increased use of health care, emergency departments, and psychoactive drugs. Several independent investigations have shown that approximately 10 - 12% of the general population have experienced at least 1 unexpected panic attack in the previous 12 months.

It is also important to remember that a panic attack can be a symptom and may occur as such in psychiatric conditions such as mood disorders, anxiety disorders (obsessive-compulsive disorder and post-traumatic stress disorder), substance abuse disorders, temporal lobe epilepsy and other organic brain disorders, and a number of other medical conditions.

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PANIC DISORDER

Panic attacks generally occur as part of panic disorder. The core feature of panic disorder is the occurrence of panic attacks, of which at least some must occur spontaneously. The defining feature of panic disorder is anxiety about the recurrence of the panic attack versus the actual experience of a panic attack. The modified diagnostic criteria for panic disorder are set out below.*

- A. Both (1) and (2):
- (1) Recurrent unexpected panic attacks.
 - (2) At least one of the attacks has been followed by one month (or more) of one (or more) of the following:
 - (a) persistent concern about having additional attacks
 - (b) worry about the implications of the attack or its consequences (e.g. losing control, having a heart attack, 'going crazy')
 - (c) a significant change in behaviour related to the attacks.
- B. The panic attacks are not due to the direct physiological effects of a substance (e.g. a drug of abuse, a medication) or a general medical condition (e.g. hyperthyroidism).
- C. The panic attacks are not better accounted for by another mental disorder, such as social phobia

*American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed. Washington, DC: American Psychiatric Association, 1987.

(e.g. occurring on exposure to feared social situations), specific phobia (e.g. on exposure to a specific phobic situation), obsessive-compulsive disorder on exposure to dirt in someone with an obsession about contamination), post-traumatic stress disorder (e.g. in response to stimuli associated with a severe stressor), or separation anxiety disorder (e.g. in response to being away from home or close relatives).

Panic disorder affects 1.5 - 2% of the population, making it 3 - 4 times as common as epilepsy. Panic disorder also occurs in a quarter of patients with generalised anxiety disorder and in more than a third of subjects who abuse alcohol.

A number of medical conditions may mimic panic disorder, e.g. neurological disorders (strokes, TIAs, multiple sclerosis, head injury, epilepsy (temporal lobe epilepsy)), cardiovascular and haematological conditions (arrhythmias, angina and myocardial infarction, pulmonary embolus, anaemia), endocrine disorders (pituitary disorders, parathyroid disorders, hypoglycaemia, Cushing's disease, phaeochromocytoma, thyroid disorders), respiratory disorders (asthma, chronic obstructive airway disease), others (drug dependence and withdrawal, medication side-effects, vestibular disorders, autoimmune diseases, electrolyte disturbances). However, panic disorder should be a positive diagnosis and not only one of exclusion.

DIAGNOSING PANIC DISORDER

The diagnosis of panic attack or panic disorder may be missed without a focused, detailed clinical history – which is not easy to obtain in an emergency unit, where these patients often present. When diagnosing panic disorder:

- carefully note the events leading up to each attack as they unfold in

chronological order

- check whether the attacks occur within the context of the 'panic attack syndrome'
- note whether the patient has had a spell of previous attacks.

OVER-INVESTIGATION AND UNDER-MANAGEMENT

In our technological and time-constrained age patients not infrequently undergo multiple special investigations for panic attacks:

- sensory and motor symptoms – CT brain scan, MRI or EEG
- palpitations, heaviness of the chest, shortness of breath – ECG, heart sonar, stress ECG and coronary angiography
- dyspnoea and heavy breathing – lung function tests, abdominal sonar
- dizziness, vertigo or unsteady feelings – ENT opinion, audiograms and other neurological investigations.

At the end of these special investigations, the underlying panic attacks may remain undiagnosed and untreated. The resultant increased uncertainty about the underlying diagnosis may aggravate the underlying anxiety. The patient may even feel perturbed or guilty that he/she experiences a very real complex syndrome of most distressing symptoms and signs, and yet the clinical evaluation and tests appear to be normal. The patient is frequently unwilling to accept a psychological or psychiatric consultation, considering the many physical symptoms he/she is experiencing, and remains stranded.

The end result is often a repeat of special investigations. Without a detailed history there is the real risk of the investigations being repeated, as these desperate patients frequently go looking for further opinions.

A correct diagnosis and explanation (usually a pamphlet on the condition) is given to the patient and may go a long way to bring relief in understanding the nature of the panic attacks. It may even lead to the

elimination of aggravating factors, e.g. the excessive intake of caffeine (coke, tea, coffee, Red Bull). At the same time the patient needs to make lifestyle changes, e.g. to improve sleep hygiene, take regular exercise and limit stress. Some patients may need appropriate pharmacological prophylactic treatment or attack management skills.

MANAGEMENT

- Reassure and calm the patient (information is important – supply literature if appropriate).
- Acute panic disorder may very occasionally be treated with short-acting benzodiazepines such as alprazolam (this may calm the patient and give confidence that the condition can be treated). However, it is important to remember that benzodiazepines are addictive, as they carry a risk of dependence – they should be used only when symptoms are incapacitating, and only for a short time.
- Antidepressants are the first line of therapy. Selective serotonin reuptake inhibitors are the drug of choice. Start with a low dose, e.g. citalopram 10 mg on alternate days and increase slowly to 20 mg daily. If there is no improvement after a 12-week course, imipramine or clomipramine could be considered.
- It is advisable to consult a psychiatrist for long-term treatment, which may include cognitive, pharmaco- and psychotherapy.

Further reading

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IN A NUTSHELL

Panic attack/disorder occurs very frequently and requires a high index of suspicion.

A detailed, meticulous history is indispensable in the diagnosis of the panic attack/disorder.

Panic attack/disorder is a frequently missed diagnosis.

Panic attack/disorder presentations may mimic multiple medical conditions.

Panic attack/disorder is not infrequently over-investigated and under-treated.

Correct diagnosis of panic attack/disorder is essential for appropriate management.

Panic attack/disorder may present with neurological lateralising findings.

A good general rule in panic attack/disorder is to take care to exclude a more serious disorder when a milder one is apparent.

When a patient over 40 years of age presents with a panic attack/disorder, the presence of an underlying physical illness becomes more likely.

SINGLE SUTURE

GROWING NEW TEETH

People who have had their teeth knocked out when playing contact sports could now regrow teeth. An ultrasound transmitter that fits neatly inside a person's mouth like a brace could help to regrow damaged teeth. The device is being developed by engineers at the University of Alberta, Canada, who discovered that ultrasound stimulation encouraged damaged teeth and jawbones to regrow in animals. Some tooth root needs to remain in place. The tooth brace sends low-power ultrasound pulses to the damaged tooth over many months. The mechanism by which ultrasound helps to repair bones is not known, although physiotherapists often use it to help heal fractures..

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