

Panic Attacks Versus Hyperventilation: Which is It?

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ABSTRACT

Hyperventilation syndrome is far more common than generally recognized, often masquerading as panic attacks. It produces various complaints that include alterations of consciousness, inexplicable sensory sensations, and it is often masked by coexisting somatic symptoms including weakness. Obscuring recognition further, symptoms attributed to the commonly encountered panic disorder are often, in reality, those of hyperventilation. Proper diagnosis of this breathing disorder depends upon a heightened awareness of its various manifestations, which can then lead to effective means of diagnosis and management.

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Introduction

According to the criteria listed in the current psychiatric handbook, panic attacks include, among others, the following features: “Trembling or shaking, sensations of shortness of breath or being smothered, feeling of choking, chest pain or discomfort, feeling dizzy, unsteady, lightheaded, or faint, chills or hot flashes, and paresthesia’s (numbness or tingling sensations), chills or hot flashes, and palpitations, and/or accelerated heart rate [1].” Although these criteria are listed as inherent properties of the panic disorder itself, this description also coincides closely with the typical features of hyperventilation syndrome [2]. Since associated hyperventilation is seldom recognized as an underlying cause of any of the aforementioned symptoms, the caregiver may proceed with reassurance and psychotropic drugs directed primarily toward control of associated anxiety. Nevertheless, the patient often continues to have the spells, which may or may not be diminished in frequency.

Hyperventilation Syndrome

Hyperventilation syndrome is seldom considered as a diagnostic probability, but nevertheless, it is surprisingly common. By most estimates, this abnormality occurs as the primary or contributing diagnosis in as many as 10% of all general medical patients, and up to 25% of all patients complaining primarily of “dizziness” or syncope [2].

Physiologic Considerations of Hyperventilation

How emotional stress can induce an excessive respiratory response is likely rooted in the evolutionary “flight or fight” reaction, wherein in anticipation of imminent need for increased exertion combined with increased adrenergic drive, rapid respiration results. If such exertion is not required, however, excessive and inappropriate breathing (hyperventilation) produces hypocapnia, respiratory alkalosis and a complex array of physiologic changes

that include widespread vasoconstriction (including cerebral) with increased neurogenic excitability, and they are likely responsible for most of the signs and symptoms as noted above in panic attacks [3].

Although frequently manifest in the form of acute attacks, hyperventilation may occur in a more chronic and insidious form [2]. Such patients may present with unimpressive symptoms that may include atypical chest pain, fatigue, mild dyspnea, or exercise intolerance. Air hunger is common, hinting the possible presence of hyperventilation, and some have even suggested that this may be an important causative factor in chronic fatigue syndrome; however, this assumption requires further investigation. Patients in this latter category may be especially difficult to manage, possibly requiring such measures as breathing training, antidepressants, and cognitive behavioral therapy.

How this Case is Best Diagnosed and Managed

The managing practitioner, observing the patient’s demeanor during history taking, may have noticed cues revealed by a subject’s occasional sighs and/or deep breaths together with other possible overt manifestations of anxiety. If any complaints also include any features, alone or in combination, listed in the hyperventilation and/or panic attacks noted above, this should trigger consideration of this latter diagnosis. Acknowledging this possibility, the clinician then should instruct the patient, preferably in the upright position, to breathe as deeply and as rapidly as possible for at least two or three minutes, or at least until some evidence of discomfort appears that includes at least numbness and tingling and/or a sensation of dizziness. If he/she responds affirmatively when asked if these sensations are similar or identical to any of those accompanying the spells, then the diagnosis is confirmed or strongly suspected. Further confirmation can be accomplished by explanation of the dynamics of hyperventilation together with how to control and suppress its appearance by first triggering it by rapid breathing and then terminating it with breath holding, maneuvers that should be practiced at home.

Relieving symptoms through re-breathing into a paper bag has been suggested, but is usually not required. The diagnosis is further confirmed if and when subsequent attacks are eliminated by these simple measures. I have noticed, however, that, in cases in which symptoms have been present for a long time, acceptance and control may be difficult, possibly owing to a deeply ingrained pattern of behavior, or in some cases, possibly to secondary gain from an attentive family or friends. Also, for uncertain reasons, the usual chest pain occurring during the attacks may not be reproduced promptly by the rapid breathing maneuver. A cardiac origin of such pain can usually be excluded by careful history taking and appropriate testing. In such cases, simple reassurance may be all that is required to minimize or eliminate pain and reduce superimposed anxiety.

The diagnosis of panic disorder offers special therapeutic opportunities: The fear and anxiety that initiate the panic response are often compounded by the unpleasant subjective complaints caused by the breathing disorder itself. This, in turn, further increases the fear and rapidity of ventilation, thus creating, in effect, a vicious cycle. By demonstrating the role played by the aggravating hyperventilation, the clinician can interrupt this feedback cycle sufficiently to ameliorate, or even eliminate, the panic response itself. In order to accomplish this objective, however, the clinician must suspect the likely superimposition of the breathing disorder on the panic state.

Why is This Diagnosis Regularly Overlooked?

First, it must be considered. Various commonly coexisting somatic complaints lacking objective confirmation², may divert attention from the underlying breathing disturbance. The rapid breathing may be erroneously considered as “shortness of breath” in response to physical disorders of the cardiac or pulmonary systems. When dizziness and altered consciousness are combined with bodily sensations of numbness, paresthesia’s, and weakness, especially when they seem to involve predominantly one side of the body², neurological evaluation may be sought to consider focal disorders such as transient ischemic attacks (TIAs) Since the diagnosis of hyperventilation syndrome is not subject to confirmation by the usual laboratory or imaging means, a simple office procedure such as forced breathing runs counter to usual diagnostic methods. Although such a diagnostic maneuver has been challenged by some that require complex pulmonary studies that include end-tidal or arterial PCO₂ levels, the simple breathing maneuver provides the simplest and most direct way to determine whether hyperventilation is producing some or all of the various symptoms. Further, more complex, testing is seldom required, but could be employed, depending upon on the results of this initial maneuver.

Lastly, in the case of panic attacks, the presence of dizziness, numbness, and somatic complaints, as noted above, should mandate a search for hyperventilation as a major contributor to the panic disorder itself and thus managed by means as suggested above.

Conclusion

A wide variety of patients manifest features considered panic attacks strongly suggest the presence—or contributory role—of hyperventilation, but this contributor is seldom recognized. As a result, provocative testing is not performed and accurate diagnosis is never established. Physicians managing large general medical populations would be well advised to consider this diagnostic combination far more frequently. Various specialty groups would also benefit from such awareness. The results could be very

gratifying to both patients and clinicians alike!

References

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