## *Case Reports*

# Panic Attack Syndrome

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Panic attack syndrome is characterized by acute incapacitating symptoms of massive autonomic nervous system discharges occuring suddenly without warning and for inapparent reason(l). The syndrome appears to have an autosomal dominant form of inheritance and studies support an endogenous origin as a causative factor in the etiology. We report our experience with one such case, which to our knowledge has not been reported earlier in the Indian literature.

**Case Report**

A 12-year-old boy was admitted with history of sudden panic attacks off and on since 8 years of age. These attacks consisted of sudden feeling of impending death, confusion, breathlessness, palpitations, giddiness, sweating, trembling and tingling sensations. Each attack lasted for few seconds to 10-15 minutes. The frequency of attacks varied from an attack a week to 2-3 attacks in a day.

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The boy had a normal developmental history, with no school failures and denied any history of intra-family stress. General examination revealed no abnormal findings except that the child was overweight for age. Blood pressure was 100/60 mm Hg. There was a soft systolic murmur in the left parasternal area in the third-fourth intercostal space. All investigations including complete hemogram; urine analysis; blood sugar; serum calcium, phosphorus and alkaline phosphatase; renal function tests and thyroid function tests were normal. Electroencephalogram showed no abnormality and electrocardiogram including stress test electrocardiography and holter monitoring were normal. Two-dimensional echocardiography revealed mitral valve prolapse with buckling of anterior mitral leaflet resulting in mild mitral regurgitation.

Many therapeutic efforts including phenothiazines, diazepem, haloperidol, tran-quilizers, antidepressants had failed. The patient was treated with propranolol, on which the child experienced subjective improvement in symptoms. On detailed enquiry there were history of similar panic attacks in mother and maternal grandmother, the former had received antidepressant therapy which she discontinued due to side-effects. Echocardiography of the mother was normal.

## Discussion

Diagnosis of panic attack syndrome in children has hardly been reported in the literature, though its existence has been noted for at least 100 years under various synonyms. It was first described in 1871 by Da Costa as "irritable heart" in Civil War Soldiers(2) and recently the term "hyperventilation syndrome" has been used(3). The disorder is differentiated from anxiety disorders by the absence of any immediate clear cut precipitating cause. The diagnostic and statistical manual of mental disorders (DSM-III) of the American Psychiatric Association(4) has laid down diagnostic criteria for this disorder which include at least three panic attacks within a three week period with no precipitating stimulus, with at least four of the twelve symptoms describing the attack and after excluding any physical or mental disorder.

The predisposition to this disorder is transmitted as an autosomal dominant trait, and our patient we believe is a third generation family member to have panic attack syndrome(5). The association of panic attack syndrome with mitral valve prolapse is as high as 30-50%, but there are studies to oppose any direct relationship between the two(6,7). However, investigators who have accepted the association between panic attacks and symptomatic mitral valve prolapse have suggested that both are manifestations of a basic generalized disturbance of the autonomic nervous system and may be a part of neuroendocrinopathy(8). Experimental studies have revealed an elevation of plasma epinephnire, plasma and urinary catecholamine and plasma lactate concentration in patients with this disorder.

Therapy usually with imipramine hydrochloride, and propranolol, is considered, when the former cannot be tolerated because of its anticholinergic or cardiotoxic effects. New drugs like alprazolam, a benzodiazepine, with GABA agonist action has been tried in adults, but is not recommended in children because of the potential for addiction and risk of severe withdrawal symptoms(9).

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