Ultradian pattern bipolar affective disorder and chronic antidepressant use

Srir,

Rapid cycling bipolar affective disorder is defined as four or more affective episodes per year and is associated with significant morbidity and treatment resistance.\[1\] Ultra-ultrarapid cycling (ultradian pattern) is defined as significant mood episodes within a 24-h period. We describe a patient with ultradian pattern of bipolar affective disorder with chronic antidepressant use.

A 53-year-old farmer with no family history of psychiatric illness presented to us with complaints of insomnia for the past 35 years. He had an episode of hypomania at the age of 16 which lasted for a year followed by an episode of major depression. The patient was prescribed Tab. Amitriptyline 75 mg once a day by the primary care physician which was later increased to 75 mg thrice a day. He had one episode of hypomania and depression each in the next two years. He continued to take Amitriptyline and each episode of illness became shorter in duration. He had five affective episodes in a year when he was 25 years of age. These episodes started occurring more frequently and in 1979 he noted around 13 episodes in a year. The patient continued the medication and the episodes continued to occur at greater frequencies. He gradually started having mood episodes every three days with hypomania alternating with depression.

Since the last six years he has been having the episodes over a 24 h period. During forenoon and afternoon he would have depressive symptoms with suicidal ideations and in the evening he would have hypomanic symptoms with grandiose ideations and increased activity. A daily VAS (visual analogue score) by the patient for his mood symptoms showed +60 in the evenings and −30 in the forenoon. The patient was gradually tapered off Amitriptyline and was started on Carbamazepine 600 mg per day with a diagnosis of Bipolar Affective Disorder Type II ultradian cycling pattern. The mood swings and his VAS ratings gradually decreased and after three weeks of hospital stay he had few days of euthymia. The patient was euthyroid and CT scan of the brain was normal. He was discharged with an advice for close follow-up.

It is not known whether ultradian cycling bipolar disorder represents a separate entity or a quantitatively different mood disorder.\[1\] This patient has been continuously taking antidepressants for 35 years despite the numerous mood episodes and had never been on any mood stabilizers. It is also not known whether antidepressants can cause ultradian cycling in bipolar illness.\[1\] This pattern is more common in women and thyroid dysfunction may contribute to this pattern of cycling. Various explanations that have been suggested include chaos theory and kindling phenomenon, but no conclusive explanations are currently available.\[3\] Low activity of catecholamine methyl transferase allele has been hypothesized as a predisposing factor for ultradian pattern rapid cycling bipolar illness.\[1\] Other diagnoses to be considered in a patient presenting for the first time with similar symptoms would include mixed episode bipolar illness, borderline personality disorder and cyclothymia.\[4\] Ultradian cycling bipolar affective disorder is difficult to treat and various mood stabilizer combinations of lithium, carbamazepine and sodium valproate have been tried.\[1\] A few case reports suggest a role for the calcium channel blocker nimodipine in the treatment of these patients.\[5\] Although rare, the physician should consider this diagnosis in a patient complaining of rapid mood swings.

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References

A case of Marfans syndrome with aminoaciduria

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Marfans syndrome is an autosomal dominant disease with a prevalence of 2-5 in 10,000 live births.\[1\] There have been very few reports of renal involvement in Marfans syndrome.\[2,3\] We report here a rare instance of aminoaciduria and phosphaturia associated with Marfans syndrome, a forme fruste of Fanconi syndrome.

A 30-year-old female was referred to our hospital with chest pain. On examination, she had marfanoid habitus. Chest roentgenogram revealed an enlarged mediastinum.
Computerized tomography scans revealed dissection of aorta Type B (Stanford Classification) without renal artery involvement.

Echocardiogram done revealed LV dysfunction. Aortic root was dilated to 45mm. There was mitral and aortic regurgitation. Serology for antinuclear antibody, anti-cardiolipin antibody and lupus anticoagulant was negative and serum creatinine was normal.

Examination revealed trauma-induced ptosis bulbi of the right eye and recurrent retinal detachment (rhegmatogenous) of the left eye with aphakia. There was also evidence of coarse chorioretinal atrophy on fundus examination of left eye suggestive of myopic disease. There was no positive family history or evidence of dural ectasia on MRI examination of the spine. Based on these, a diagnosis of Marfans syndrome was made in our patient. Our patient satisfied the diagnosis of Marfans syndrome proposed by Rimoin et al in the absence of a positive family history by the presence of two major criteria (aortic dissection and aortic root dilatation) and the presence of more than two minor criteria (myopia, retinal detachment, mitral valve prolapse, skeletal deformities).

Urinary was negative for homocysteine. Screening for other inborn errors of amino acid metabolism like cystinuria, dibasic aminoaciduria and Hartnup disease was negative. Urine nitroprusside test for amino acids was positive and quantitative urine amino acid analysis revealed generalized aminoaciduria of the physiological type. Urine for glucose was negative. The 24h uric collection revealed proteinuria of 800 mg/24h (Normal < 150 mg/24h) and phosphaturia of 1100 mg/24h (Normal 10-15 mg/kg/24h). All other solutes in the urine like uric acid, glucose, calcium, sodium and potassium were normal. There was no past history of exogenous intoxications with metals, organic compounds or drugs to suggest the cause of proximal tubular dysfunction. Her serum calcium, magnesium, phosphate and arterial blood gas analysis was normal. X-ray was normal with no osteopenia.

Renal involvement in Marfans syndrome is distinctly rare. There have been reports of reno-vascular hypertension and glomerular involvement. We report here a case with aminoaciduria and phosphaturia, a forme fruste of Fanconi syndrome. The patient was investigated for other evidence of Fanconi syndrome, which was found to be negative. The workup for other causes of aortic root dilatation like Ehlers-Danlos syndrome Type 4 (EDS) and familial aortic aneurysms was not done in view of the patient satisfying the criteria for Marfans syndrome convincingly, with no other suggestive features of these syndromes and also that EDS Type 4 only occasionally causes aortic dissection.

Fanconi syndrome is characterized by aminoaciduria, glucosuria and phosphaturia as cardinal features, while acidosis, hypouricemia, hypercalciuria, hypokalemia, polyuria and proteinuria are also commonly associated features. In addition there are incomplete forms of Fanconi syndrome in which at least one of the cardinal features are missing.

The cause of aminoaciduria in Marfans syndrome as a forme fruste of Fanconi syndrome is very difficult to speculate. Probably, if the renal artery was involved in dissection, that could explain the findings as due to ischemia. But the renal artery was not involved in our case to explain the association. Probably, mutations in the fibrillin gene in Marfans syndrome produce defective binding regions in the epidermal growth factor-like domains, which could cause defective arrangement of transporters in the renal tubule cells. Probably, the proximal tubular cells perform the bulk of reabsorption of the glomerular filtrate, while the distal cells have less of these functions and so are not evident in an overt manner.

This is a new observation. There have been a few sporadic reports in some older papers but the real diagnosis of Marfans syndrome in these cases are in doubt. The clinical significance of this observation requires long-term follow-up and experimental studies.

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