Schizophrenia in a Man With Probable Marfan Syndrome

To the Editor: Marfan syndrome (MFS) is a genetic disorder of the connective tissue with an incidence of about 1 in 3,000 to 5,000 births.[1] MFS is an autosomal dominant disorder, but about one-fourth of patients show sporadic mutations.[1] MFS primarily affects the skeleton, cardiovascular system, and eyes. Ghent criteria[1] revised periodically have been developed by an international panel for classifying patients with MFS. More than 90% of patients clinically diagnosed with MFS by Ghent criteria have a mutation in the gene fibrillin-1 (FBN-1).[2]

Schizophrenia is a debilitating psychiatric syndrome that affects 1% of the population.[3] The mortality rate of schizophrenia patients is 8 times greater than that of the general population.[3] Co-occurrence of schizophrenia with MFS within families suggests the presence of a common genetic factor.[3,4] Heritable disorders of connective tissue (HDCTs) as a whole are associated with psychiatric symptomatology. Anxiety disorders, schizophrenia, depression, neurodevelopmental disorders, eating disorders, personality disorders, and substance abuse are some of the psychiatric conditions associated with HDCTs.[5] Diagnosis of HDCTs can be a challenge in developing countries wherein genetic evaluation is unavailable. Age factors and mild symptoms leading to diagnostic confusion are a hindrance to proper management and follow-up in these patients.[6]

Case report. A 19-year-old tall and slender man visited the psychiatry outpatient department of the Gauhati Medical College Hospital, Guwahati, Assam, India. He was diagnosed with MFS 5 years ago at another hospital. The present complaints were frequent wandering, staring in 1 direction for prolonged duration, smiling without appropriate reasons, and suspiciousness toward family members. He often asked his family members whether they had mixed anything with his food. He would suddenly become aggressive, both verbally and physically. He would mutter and sometimes talk out of context. The onset of symptoms was gradual, and the course of illness was continuous for the last 2 years. There was mild improvement with psychotropic medication, but he never reached his premorbid level of functioning. Moreover, he was noncompliant with his medications. The mental status examination revealed thought abnormality in the form of delusions of persecution; there was no abnormality in perception and cognition.

The patient had a history of palpitations, which had prompted his evaluation for and subsequent diagnosis of MFS. Obvious skeletal abnormalities compelled us to consult the medical department, as there had been no follow-up since his MFS diagnosis 5 years previously. Positive skeletal abnormalities in the form of thumb sign, wrist sign positivity, arachnodactyly, increased arm span, upper segment to lower segment ratio, and bilateral prominence of the sixth costochondral junction were reported. There was no deformity of chest, abnormal heart sounds, or lens dislocation. He was diagnosed with paranoid schizophrenia (*ICD-10* criteria)[7] with MFS.

Patients with MFS are vulnerable to cardiovascular problems (aortic aneurysms, root dilation, severe mitral valve regurgitation and prolapse) along with eye problems (upward lens displacement leading to cataract formation, elongation of globe and retinal detachment).[2] These complications are preventable. As studies[4,8] suggest a possible co-occurrence of MFS with schizophrenia, a constant vigilance is a must for children and adolescents suspected to have or diagnosed with MFS. Awareness of the prevalence of psychiatric comorbidity with MFS may improve management and reduce risk or even prevent psychiatric complications. As diagnostic tests based on detection of gene for FBN-1 are not universally available, the diagnosis is dependent on Ghent criteria, and a baseline slit lamp and echocardiogram are necessary.

The 2010 revised Ghent criteria requires—in the absence of family history of MFS, aortic root aneurysm, and ectopia lentis (absent in our patient)—that the patient have at a minimum an aortic root dilation score of $Z \geq 2$ in addition to sufficient systemic findings (a combined score ≥ 7 points is required).

Without the combined score of the systemic findings according to the Ghent criteria, a definitive diagnosis of MFS is not possible. Without an echocardiogram (in our patient, the earlier report was lost and another investigation could not be afforded), presence of aortic root dilation, a necessary criterion for a diagnosis of MFS, is unclear.

MFS should not be ruled out in children and adolescents even when Ghent criteria are not fulfilled. Instead, physicians should remain vigilant for development of MFS complications, including the possible psychiatric manifestations. However, a diagnosis of MFS under such circumstances should be weighed carefully. A misdiagnosis is as bad as a nondiagnosis, and extra care needs to be taken that the patient is diagnosed and treated properly.

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Sanju Buragohain, MD[a]
Maitreyee Bhattacharyya, MD[b]
Shailendra Kumar Talukdar, MD[a]
Shyamanta Das, MD[a]
dr.shyamantadas@gmail.com

[a]Department of Psychiatry, Gauhati Medical College Hospital, Bhangagarh, Guwahati, Assam, India

[b]Department of Medicine, Gauhati Medical College Hospital, Bhangagarh, Guwahati, Assam, India

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