Published in final edited form as:

J ECT. 2009 December ; 25(4): 276–277. doi:10.1097/YCT.0b013e3181a09d69.

Successful use of ECT for catatonia in a patient with Marfan syndrome

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Introduction

Study of psychiatric disorders co-occurring with genetic syndromes like Marfan syndrome has significant therapeutic and pathophysiological implications. Although reports of Marfan syndrome co-segregating with schizophrenia have been published earlier (Romano and Linares, 1987, Sirota et al., 1990), there are no reports of co-occurrence of Marfan syndrome and catatonia. We present a patient with Marfan syndrome presenting in catatonia and its successful treatment with electroconvulsive therapy. The report highlights the importance of careful evaluation of patients with catatonia in liaison with other specialities and pre ECT precautions.

Case report

Mrs. A, 25 year old married lady presented with 2 months history of posturing, staring, psychomotor retardation, social withdrawal, progressive mutism, auditory hallucinations, irritability and significant socio occupational dysfunction. On examination, she had immobility, mutism, staring, posturing, withdrawal, automatic obedience, mitgehen and ambitendency. She met the ICD-10 criteria for schizophrenia. Her score on Bush Francis catatonia rating scale (BFCRS) (Bush et al., 1996) was 14.

On physical examination she had tall stature, high arched palate, arm span (172 cm) to height (162cm) ratio of 1.06, upper segment (63cm) to lower segment (99 cm) ratio of 0.63, pectus carinatum, arachnodactyly, wrist sign, thumb sign, pan systolic murmur suggestive of Marfan syndrome. Echocardiographic study showed mitral regurgitation. A metabolic screen using tandem mass spectroscopy and screen of urine for abnormal metabolites including homocystine were normal. MRI scan of brain also did not reveal any structural abnormality.

In view of her symptoms, we started oral lorazepam 6mg/day. There was no improvement at the end of three weeks and thus changed to intravenous lorazepam for one week. There was only a minimal improvement (BFCRS decreased to nine from fourteen). As patient's condition did not improve, we started electroconvulsive therapy (ECT). Anesthetist and cardiologist evaluated the patient before ECT. As per their suggestion, we gave antibiotic prophylaxis for infective endocarditis (Inj. Ceftriaxone one gram intra venously) before ECT. We gave six ECTS over a period of two weeks. Patient showed good improvement with the treatment and score on BFCRS decreased to five at the end of one week and did not have any catatonic sign at the end of two weeks (BFCRS-zero). We did not observe any complications following ECTs. She was started on Tab. Risperidone six mg/day and Tab.

Trihexy phenidyl 2mg/day. She maintained improvement until last follow up at the end six months.

Discussion

To the best of our knowledge, this is the first report of Marfan syndrome co occurring with catatonia. Our report highlights the importance of careful evaluation of patients with catatonia in liaison with other specialities. Treatment of catatonia in a patient with Marfan syndrome is challenging due to involvement of multiple organ systems and use of electroconvulsive therapy in these patients needs careful evaluation of cardiovascular system and proper precautions. The index patient received ECT under antibiotic prophylaxis and did not have any post ECT complications. The report shows that ECT is safe in patients with Marfan syndrome with careful pre-ECT evaluation and prophylaxis.

Co-occurrence of schizophrenia and rare syndromes with known gene locus has given useful leads for elucidating the pathogenesis of schizophrenia as exemplified by association of catecholamine-o-methyl transferase gene with velocardiofacial syndrome (Murphy, 2002) . Interestingly, a major susceptibility locus on chromosome 15q15 and 22q13 has been identified for periodic catatonia, a sub type of schizophrenia (Stober et al., 2001) close to the gene locus for Marfan syndrome. However, authors did not find comorbidity between periodic catatonia and Marfan syndrome in their study population.

Our report of Marfan syndrome presenting with catatonia, supports the same. However, we did not do genetic testing due to non availability of facilities which would have confirmed the diagnosis of Marfan syndrome according to revised criteria (De Paepe et al., 1996). Further studies are required on genetic aspects of Marfan syndrome having catatonia presentation which may further lead to better understanding of this disorder.

References

- BUSH G, FINK M, PETRIDES G, DOWLING F, FRANCIS A. Catatonia. I. Rating scale and standardized examination. *Acta Psychiatr Scand.* 1996; 93:129–36. [PubMed: 8686483]
- DE PAEPE A, DEVEREUX RB, DIETZ HC, HENNEKAM RC, PYERITZ RE. Revised diagnostic criteria for the Marfan syndrome. *Am J Med Genet.* 1996; 62:417–26. [PubMed: 8723076]
- MURPHY KC. Schizophrenia and velo-cardio-facial syndrome. *Lancet.* 2002; 359:426–30. [PubMed: 11844533]
- ROMANO J, LINARES RL. Marfan's syndrome and schizophrenia: a case report. *Arch Gen Psychiatry.* 1987; 44:190–2. [PubMed: 3813818]
- SIROTA P, FRYDMAN M, SIROTA L. Schizophrenia and Marfan syndrome. *Br J Psychiatry.* 1990; 157:433–6. [PubMed: 2245279]
- STOBER G, PFUHLMANN B, NURNBERG G, SCHMIDTKE A, REIS A, FRANZEK E, WIENKER TF. Towards the genetic basis of periodic catatonia: pedigree sample for genome scan I and II. *Eur Arch Psychiatry Clin Neurosci.* 2001; 251(Suppl 1):125–30. [PubMed: 11776268]