



ORIGINAL RESEARCH PAPER

Cardiothoracis

SEVERE RHEUMATIC MITRAL STENOSIS IN A CASE WITH VENTRICULAR SEPTAL DEFECT AND PATENT DUCTUS ARTERIOSUS - A RARE ASSOCIATION

KEY WORDS:

Dr. Ranjana Lanjewar

Associate professor) Department of Cardiovascular and Thoracic Surgery, Jawaharlal Nehru Medical College, Sawangi (Meghe), Wardha, Maharashtra.

Dr Sayajirao Sargar*

Assistant Professor, Department Of Cardiovascular And Thoracic Surgery, Jawaharlal Nehru Medical College, Datta Meghe Institute Of Medical Sciences, Sawangi Meghe, Wardha, Maharashtra. *Corresponding Author

ABSTRACT

The combination of different congenital heart defects like Ventricular Septal Defect (VSD) and Patent Ductus Arteriosus (PDA) associated with rheumatic mitral stenosis are rare to find. A 25 years old female was suffering with dyspnoea on exertion of NYHA grade II-III and easy fatigability since about 2 to 3 years which was progressively worsening. Her weight was falling and general condition was deteriorating. 2D Echo showed Severe Mitral stenosis and ventricular septal defect. Hospital based studies have found that co-occurrence of at birth heart disease and presence of RHD is a rare phenomenon. This case highlights the importance of consideration of coexistence of acquired and congenital cardiac malformations in the same patient. So a high index of suspicion is necessary with detail work up and evaluation of all such patients. This can surely prevent further morbidity in these patients.

INTRODUCTION-

In Indian subcontinent Rheumatic heart disease (RHD) is still one of the major health problems and mitral stenosis is frequently seen. Etiopathologically rheumatic heart disease is an auto immune mediated cardiac damage following Group A Beta hemolytic streptococcal infection. The malformations related to congenital heart disease have their origin in events occurring in the embryonal stage of development. The combination of different congenital heart defects like Ventricular Septal Defect (VSD) and Patent Ductus Arteriosus (PDA) associated with rheumatic mitral stenosis are rare to find.

Study Report:

A 25 years old female was suffering with dyspnoea on exertion of NYHA grade II-III and easy fatigability since about 2 to 3 years which was progressively worsening. Before this she suffered from pneumonia since early childhood for which she was treated at local centres. On examination she had a cachexic look. Cardiovascular examination revealed loud first heart sound, apical long mid diastolic murmur and grade III pansystolic murmur in left parasternal region

Investigations

1) Electrocardiogram showed extreme right axis deviation, bi-atrial enlargement, right ventricular hypertrophy and strain pattern. 2) Chest X-ray showed enlarged heart shadow with enlarged pulmonary artery shadow with peripheral plethora. 3) 2D Echo showed Severe Mitral stenosis (Mitral valve orifice 0.8 mm²), mean mitral valve pressure was 15 and ventricular septal defect with L to R shunt (peri-membranous VSD-6mm).



Figure 1. ECHOCARDIOGRAPHY severe Mitral stenosis with ventricular septal defect, (b) AML = anterior mitral leaflet, PM1, PM2 = papillary muscles, PML = posterior mitral leaflet, V1 = ventricular septal defect

4) Cardiac catheterization revealed Large Perimembranous VSD, L to R shunt, RSOV to RV, Severe PAH. The diagnosis of severe mitral stenosis with congenital malformation of VSD was made patient was operated. Left atrium was opened.

There was huge left atrial return. PDA was searched for. A large PDA was found Mitral valve replacement was done, VSD was closed and PDA was ligated

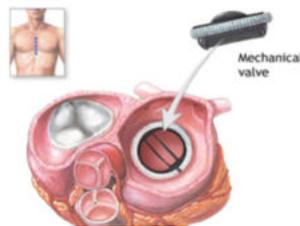


Figure 2 Mitral Valve Replacement with mitral mechanical valve

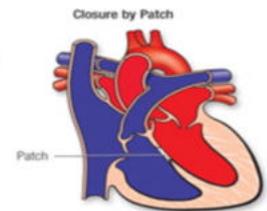


Figure 3 Ventricular Septal Defect closure with Dacron patch

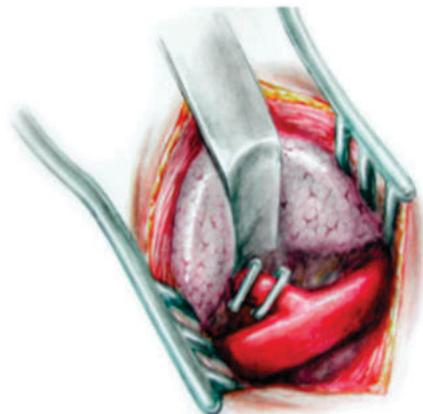


Fig.4 Exposure Of The Double-clipped Patent Ductus Arteriosus

The lung withdrawn anteriorly

PDA was ligated. Mitral valve was replaced with 25 mm mitral mechanical prosthesis and VSD was closed with Dacron patch. Post operative echocardiography showed normally functioning mitral prosthesis and no shunt across VSD and PDA. Post operative period was uneventful and patient recovered well.

DISCUSSION:

Hospital based studies have found that co -occurance of at birth heart disease and presence of RHD is a rare phenomenon^{1,2,3}. An article from India revealed that very few cases have both the diseases with ASD, VSD, PDA and bicuspid aortic valve being the common congenital heart lesion². The presence of rheumatic fever/ rheumatic heart disease was significantly higher in children with CHD (8.8 %) as compared to those without CHD (0.3%)². Thus it is impossible to decide whether the presence of heart disease since birth predisposes to RHD⁴. There are few cases reported in the literature where RHD with severe mitral stenosis was associated with VSD^{5,6}. In our case she was operated upon, MVR was done PDA was ligated and VSD was closed with dacron patch.

CONCLUSION:

This case highlights the importance of consideration of coexistence of acquired and congenital cardiac malformations in the same patient. So a high index of suspicion is necessary with detail work up and evaluation of all such patients. This can surely prevent further morbidity in these patients.

REFERENCES:

1. Bokhandi S.S., Tullu M.S., Shaharao V.B., Bavdekar S.B., Kamat J.R. Congenital heart disease with rheumatic fever and rheumatic heart disease: a coincidence or an association? *J Postgrad Med.* 2002;48:238.
2. Gupta I., Gupta M.L., Parihar A., Gupta C.D. Epidemiology of rheumatic and congenital heart diseases in school children. *J Indian Med Assoc.* 1992;90:57-59.
3. Bahadur K.C., Sharma D., Shrestha M.P. Prevalence of rheumatic and congenital heart disease in schoolchildren of Kathmandu valley in Nepal. *Indian Heart J.* 2003;55:615-618
4. Soumya Patra,¹ Basant Kumar, Kanchanahalli Siddegowda Sadananda, et al, Juvenile severe mitral stenosis predisposing Eisenmenger syndrome in a case with ventricular septal defect, patent ductus arteriosus, coarctation of aorta & hypoplastic aortic arch: Report of first case of rare association, *J Cardiovasc Dis Res.* 2013 Sep;4(3):195-197.
5. Chiu C.Z., Shyu K.G. Coexistent supracristal ventricular septal defect and severe rheumatic mitral stenosis in a middle-aged woman: a case report. *FJMJ.* 2009;7:39-45.
6. Befeler B., Hildner F.J., Cohen L.S., Javier R.P., Samet P. Combined rheumatic and congenital heart disease in adult patients. *J Fla Med Assoc.* 1971;58:24-27.