



## **CASE REPORT**

### **RHEUMATIC HEART DISEASE WITH MITRAL STENOSIS PRESENTING WITH VENTRICULAR TACHYCARDIA, A RARE CASE REPORT.**

**Mohd Younus Shah, Amarjit Singh Vij, Faisal Shah, Faizan Shah**

1. Ass. Prof. Dept. Of gen. Medicine,
2. Prof. Dept. Of gen. Medicine
3. Resident doctor
4. Resident doctor.

**PIMS Jalandhar, India**

**Corresponding Author: Dr. Mohd Younus Shah, 318 Mustafabad, Gousia Colony, Bemina, Srinagar, India, 190018**

#### **Abstract:**

The rheumatic heart disease (RHD) is a common problem in developing countries like India with a prevalence rate of 0.5 to 0.67 per 1000. Most common complication of RHD is Mitral stenosis (MS). Pure MS occur in approximately 40% of all patients with RHD. The most common arrhythmia noted in MS is Atrial Fibrillation (AF), atrial flutter, AF with aberrant conduction. MS as such does not give rise to Ventricular Tachycardia (VT). We are presenting a case of 35 years old labourer having RHD with MS who presented with sustained VT.

**Key words:** Rheumatic heart disease; mitral stenosis; arrhythmia; ventricular tachycardia;

#### **INTRODUCTION**

The prevalence rate of rheumatic heart disease in India is reported as 0.5 to 0.67 per 1000. Mitral stenosis is more common in females. Pure MS occur in approximately 40% of all patients with RHD. Rheumatic Heart Disease (RHD) continues to be a serious health problem in the developing countries. The severity of rheumatic mitral valve disease in the developing countries differs in many ways from that in the industrialized countries. In studies from developed countries mitral stenosis was considered a delayed manifestation and less common especially in the first decade of life suggesting that it takes several decades to evolve. This inference was supported by echocardiography-based longitudinal studies that have estimated the average decline in valve area are as low as 0.09 cm<sup>2</sup>/year.

The most common arrhythmia noted in MS is AF, atrial flutter, AF with aberrant conduction. MS as such does not give rise to VT. It is very unusual. So we are presenting a case of RHD with MS presenting with sustained VT.

#### **CASE PRESENTATION**

A young male aged 35 years, labourer by profession a diagnosed case of Rheumatic heart disease with critical Mitral stenosis, severe PAH, trivial MR presented in emergency department with

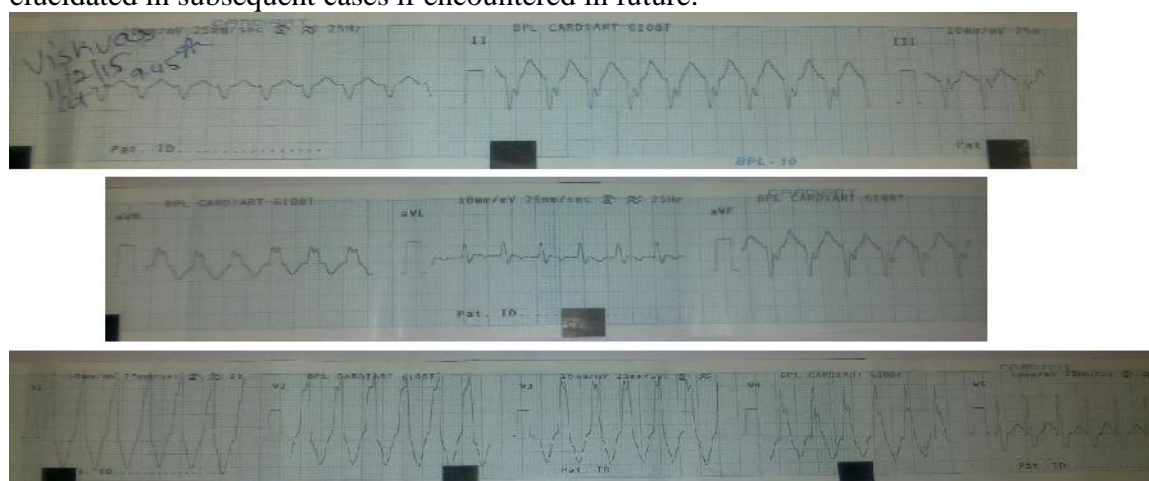


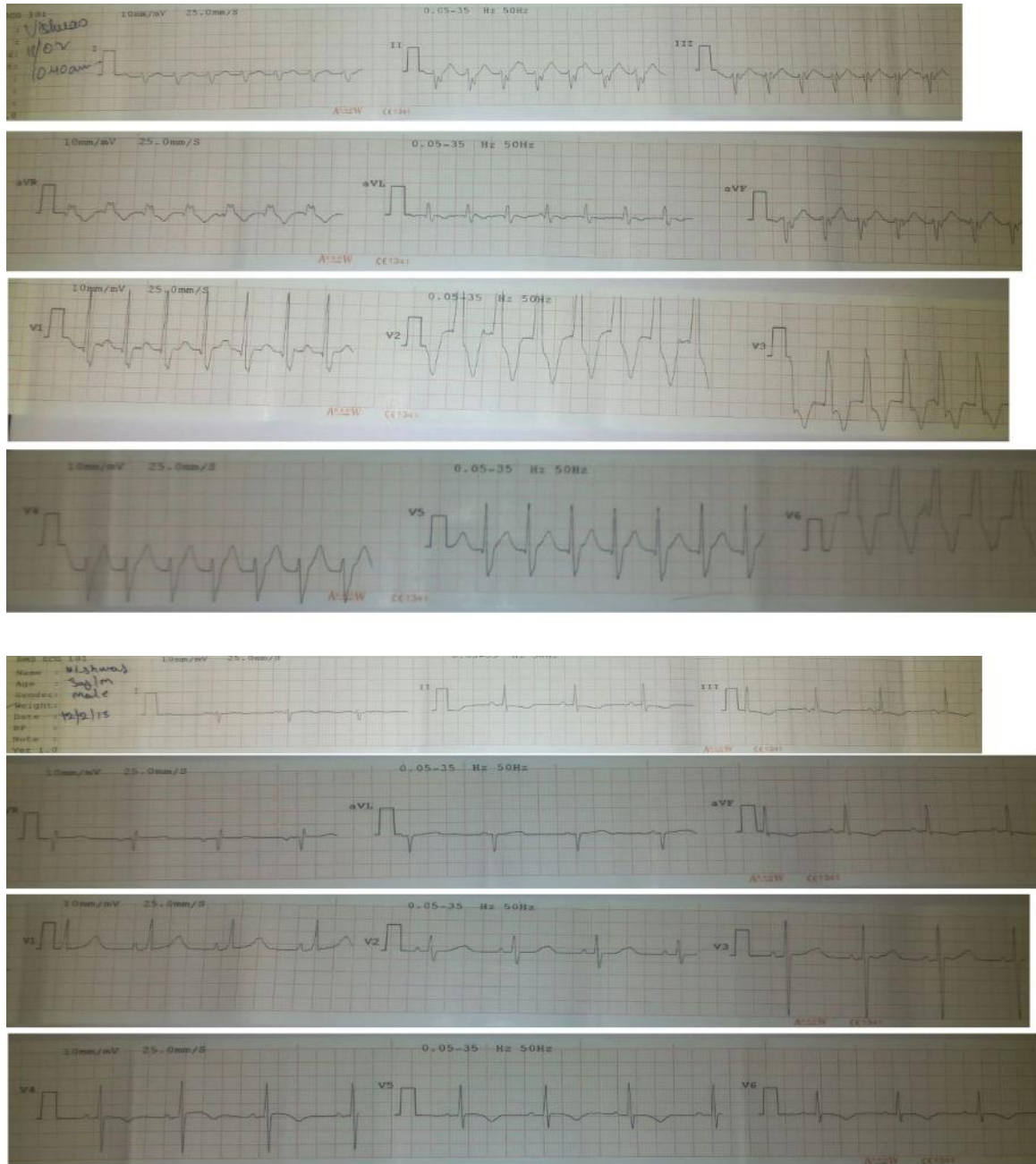
shock, but no history of chest pain, fever, breathlessness, diarrhoea or vomiting. The patient was advised balloon valvuloplasty/surgery 2 years back at PGI Chandigarh. Being from a poor and weaker section, patient didn't comply with the advice. The patient also did not take any medication nor was on any prophylaxis for infective endocarditis. General physical examination revealed a moderately nourished individual with no pulse and non-recordable BP.

On examination, JVP: Cannon 'a' waves. Chest: clear, CVS: varying 1<sup>st</sup> heart sound. ECG showed VT. In ECG, there was wide QRS complex, tachycardia with a rate of 200 bpm, AV dissociation and P waves were seen and QT interval was not prolonged. Patient was shifted to ICU, was put on oxygen, IV line was secured and ABG was done. His potassium was 4.5 mEq/L. Patient was prepared for DC shock. A shock of 100 Joules was given. The patient was put on anti-arrhythmic drug Amiodarone. The patient responded and his blood pressure came up and he formed urine and patient was discharged on 3<sup>rd</sup> day and advised to go for balloon valvuloplasty/surgery as had been advised by PGI Chandigarh earlier. The patient was put on treatment.

## DISCUSSION:

This is a rare case, we could not find any reported case in literature of MS presenting with VT. So we are presenting this case. In RHD with pure MS, VT has not been reported, however AF, Atrial flutter are commonly noted arrhythmias. The patients with rheumatic heart disease are usually put on digoxin, diuretics. The VT may be recorded in case of digoxin toxicity (bidirectional VT) or diuretic related hypokalemia may lead to torsades-de-pointes and present as VT. Our patient was diagnosed RHD, critical mitral stenosis, and was advised to go for balloon valvuloplasty/surgery 2 years back. Since the patient belongs to the weaker section of the society, he was not taking any drug, nor was following any drug regime. We postulate that VT in this case might have occurred because of fibrosis involving mitral annulus, extending to myocardium leading to a sort of scar tissue which has given rise to ventricular tachycardia and has presented in emergency department in a critical condition. Such postulation needs to be elucidated in subsequent cases if encountered in future.





## SINUS RHYTHM AFTER TREATMENT



## REFERENCES

1. Savitri S. Rheumatic heart disease: is it declining in India? *Indian Heart J* 2007;59:9 10.10
2. Bokhandi SS, Tullu MS, Shaharao VB, Bavdekar SB, Kamat JR. Congenital heart disease with rheumatic fever and rheumatic heart disease: a coincidence or an association? *J Postgrad Med* 2002;48:238 238.238
3. Mohan JC, Arora R, Khalilullah M. Double outlet right ventricle with calcified rheumatic mitral stenosis *Indian Heart J* 1991;43:397 399.399
4. Kirklin JW, Baratt Boyes BG, Kochoukos NT, Blackstone EH, Hanley FL, Doty DB, Karp RB. Ventricular septal defect with pulmonary stenosis or atresia *Cardiac Surgery: Morphology, Diagnostic Criteria, Natural History, Techniques, Results, and Indications* (3) 2003. Philadelphia: Churchill Livingstone; :946 1073.1073
5. Perloff JK. Perloff JK. Congenital obstruction to left atrial flow: mitral stenosis, cor triatriatum, pulmonary vein stenosis *The Clinical Recognition of Congenital Heart Disease* (5) 2003. Philadelphia: Saunders; :144 156.156
6. Li W, Somerville J. Infective endocarditis in the grown-up congenital heart (GUCH) population *Eur Heart J* 1998;19:166 173.173
7. Knirsch W, Haas NA, Uhlemann F, Dietz K, Lange PE. Clinical course and complications of infective endocarditis in patients growing up with congenital heart disease *Int J Cardiol* 2005;101:285 291.291
8. Jouannon C, Charrad R, Durup F, Bical O, Favereau X, Tran Thanh X, Corcos T, Souffrant G, Toussaint M. Tetralogy of Fallot and mitral valve stenosis *Arch Mal Coeur Vaiss* 1992;85:623 626.626
9. Kasliwal RR, Shah SN. Valvular heart disease *API Text Book of Medicine* (7) 2006. Mumbai: The Association of Physicians of India; :405 410.410
10. Chandrasekhar Y, Narula J, Alpert JS, Dalen JE, Rahimtoola SH. Rheumatic fever *Valvular Heart Disease* (3) 2003. Philadelphia: Lippincott, Williams & Wilkins; :41 73.73