



A CASE OF ATRIAL FIBRILLATION WITH ABERRANCY SIMULATING VENTRICULAR TACHYCARDIA

Dr Akshay Reddy Palamoor*

Junior resident , Department of general Medicine Goa medical college

*Corresponding Author

Dr Abhishek Hiremath

Junior resident , Department of general Medicine Goa medical college

ABSTRACT

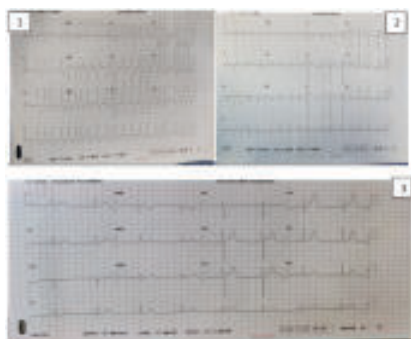
Wide complex tachycardia is tachycardia defined as QRS complex more than 120 ms .It is a life threatening arrhythmia , often physicians come across these life threatening arrhythmias most important among them are ventricular tachycardia and tachycardia with aberrant pathway . Identifying the correct cause of tachycardia is imperative to ensure appropriate Treatment and Management .

KEYWORDS :

INTRODUCTION :

Our patient is a 37 year old male patient with no structural heart disease previously presented with palpitations , chest discomfort and breathlessness class 3 NYHA .At presentation patient was hemodynamically stable , ECG suggestive of irregular wide complex tachycardia and there was a evidence of ? Sinus captured beat v/s intermittent conduction via Aberrant pathway with doubtful looking delta wave (ECG 1) ; diagnosis of wolff-parkinson-white syndrome was made and was started on intravenous amiodarone following which patient manifested underlying atrial flutter-fibrillation rhythm (ECG 2). On further evaluation troponin I was negative and 2D echo revealed mitral stenosis likely due to rheumatic origin with dilated left atrium and moderately depressed Left ventricular function. Coronary angiography was performed which showed normal coronaries.ECG features of pre excitation were obscured in the reverted ECG . Then , patient was subjected to 24 hour holter monitoring , which showed underlying rhythm of atrial flutter fibrillation with no evidence of runs of ventricular tachycardia. In view of alarming arrhythmia presenting in a patient with underlying atrial flutter fibrillation and Considering many prospective studies,[4,5] showing risk of frequent recurrences of such arrhythmias and sudden cardiac death in such patients; he was subjected to electrophysiological study , which revealed left anterolateral accessory pathway. Patient underwent successful radiofrequency ablation and now patient is currently in normal sinus rhythm (ECG 3).

Electrocardiogram



DISCUSSION

In a Normal heart , Conduction from atria to ventricles is through AV node , but in wolff-parkinson-white syndrome accessory pathway is present (location of which can be detected on 12 lead ECG by Olgin and Zipes criteria)[1] which bypasses AV node . This pathway without physiological delay @ AV node causes arrhythmias , AVRT with wide complexes in Atrial fibrillatio / Atrial flutter. Classical ECG findings in WPW include 1. short PR interval 2. delta waves 3. wide QRS complex with increased ventricular activation time[1,2]. In this patient wide complex tachyarrhythmia was diagnosed as AF with preexcitation (although presence of sinus captured beat (as seen in ECG 1) initially led to confusion between VT v/s Atrial fibrillation with intermittent conduction via aberrant pathway) because of irregularity of rhythm ,

presence of delta waves and rapid ventricular response . Acute treatment of preexcited atrial fibrillation requires a rapid acting drug that can slow down conduction via accessory pathway. Studies approve use of procainamide and ibutilide [2] , both these medications decrease ventricular rate by slowing conduction via accessory pathway. Beta blockers which is used in atrial fibrillation without aberrant pathway can worsen the arrhythmia at wolff-parkinson-white syndrome by increasing impulse conduction via accessory pathway which might degenerate to ventricular tachycardia and fibrillation. Catheter ablation or Radio frequency ablation of accessory pathway is recommended treatment for long term therapy of pre-excited atrial fibrillation. In this patient who had underlying accessory pathway developed rheumatic heart disease and subsequently atrial fibrillation with fast ventricular rate which conducted through accessory pathway leading to acute symptoms.

CONCLUSION :

We should keep in mind pre excited atrial fibrillation in irregular and wide complex tachycardia . If patient is hemodynamically stable either procainamide / ibutilide may be effective in slowing conduction velocity of accessory pathway.

This rhythm can be sometimes difficult to differentiate from polymorphic Ventriculat tachycardia , Immediate treatment in hemodynamically unstable patient is DC cardioversion but definitive treatment for prevention of recurrent arrhythmia is radiofrequency ablation . Also to remember is presence of peaked T wave where delta wave was most noticeable with concordant polarity following radiofrequency ablation mainly in leads I , aVL , and chest leads ; such an ECG abnormality is classic post ablation memory T wave pattern often considered as a sign successful ablation^[4].

ABBREVIATIONS :

VT : Ventricular tachycardia
AVRT : Atrioventricular reentrant tachycardia
WPW : Wolff Parkinson White
NYHA : Newyork Heart Association

REFERENCES

1. Basic and bedside electrocardiography by ramulo baltazar south asian edition.
2. Braunwalds heart disease 11th edition
3. Atrial fibrillation with wide QRS tachycardia and undiagnosed wolff-parkinson-white syndrome : diagnostic and therapeutic dilemmas in pediatric patient ; prashant panduranga etal.
4. Atrial fibrillation in patient with accessory pathway by andrew silvermann ; SAGE publications
5. Trio of rheumatic mitral stenosis, right posterior septal accessory pathway and atrial flutter: a case report by jogendra singh et al. ; JAPSC journal .