Introduction: Atrial fibrillation associated with preexcitation is life threatening. Our study aimed to characterise the incidence, clinical features electrophysiologic characteristics and outcomes of patients presenting atrial fibrillation with fast ventricular rates associated with an accessory pathway.

Methods: This is a both retrospective and prospective study. Retrospective data over 10 year and prospective data for 1 year was collected. Out of 2876 patients undergoing electrophysiologic study, 320 patients had manifest preexcitation on ECG. Patients who had presented with atrial fibrillation and fast ventricular rates were included in the study.

Result: Out of 320 number of patients had manifest preexcitation on ECG, 41 (12.8%) presented with Atrial fibrillation and fast ventricular rates. Mean age of presentation is 38.5±12.3 yr. 29 (72.5 %) are male. Most common presenting feature ware palpitations, presyncope and syncope. 28(71.09 %) patients required cardioversion for treating the presenting episode. Two patients who had narrow complex tachycardia and were given adenosine developed atrial fibrillation and fast ventricular rates and have to be cardioverted. Systemic amiodarone was effective in 11(28.9%) patients. Most common pathways involved in WPW(Wolff-Parkinson-White) syndrome with AF (Atrial fibrillation) are right poster septal (33.33%) followed by coronary sinus epicardial (22.92 %). Five (12.19%) patients had multiple pathways. CS diverticulum was seen in 6 (14.65%) patients. Ablation was required to be done during atrial fibrillation in six (14.65%) patients. All had immediate successful ablation except one. One patient had a recurrence of preexcitation on follow up and successfully ablated during redo procedure.

Conclusion: Atrial fibrillation with WPW syndrome is common and seen in 12.8 % of all patients with preexcitation. It is common in middle aged male and in posteriorly located accessary pathways. It is also commonly associated with CS diverticulum and multiple pathways. Radiofrequency ablation has good outcomes.