

Medical Image

Title: Appropriate Localisation of Epicardial Accessory Pathway of WPW Syndrome-Initial Step to Success

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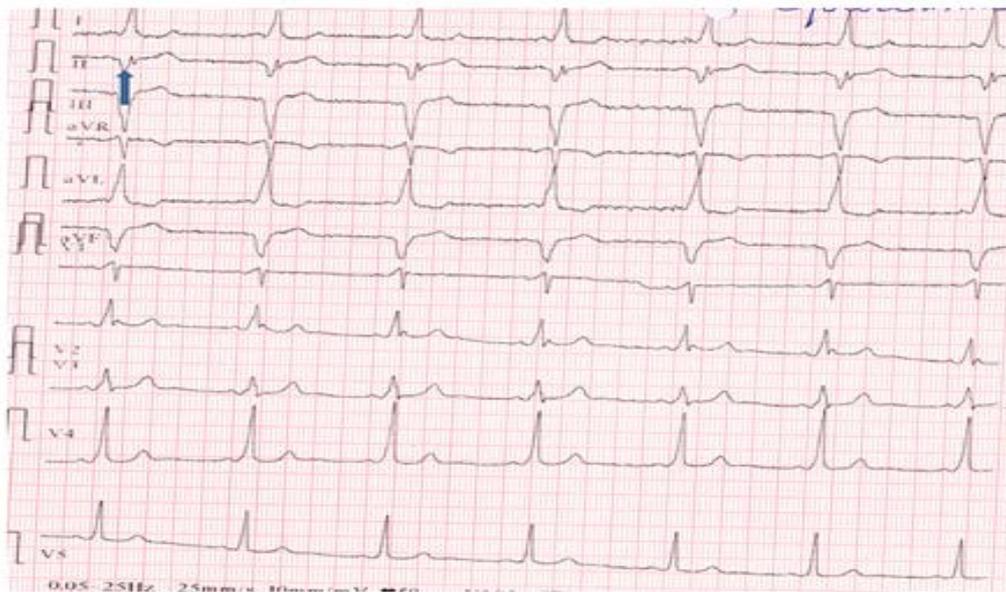


Figure 1: ECG Showing positive delta waves in leads I, AVL, V1-V6 and deeply negative delta wave in lead II.

Subepicardial posteroseptal accessory pathways, which consist of accessory pathway (AP) required ablation from within the subepicardial venous system, including the middle cardiac vein and other coronary veins [1]. As the electrocardiogram (ECG) algorithm accurately localizes accessory pathways prior to ablation, it may help the physician advise the patient regarding the likelihood of success and complications of the procedure. The ECG algorithm may aid selection of patients in whom coronary sinus angiography should be performed in order to delineate its anatomy, thus allowing mapping in the coronary veins and anomalous structures of the coronary sinus. A negative delta wave in lead II identifies the subepicardial posteroseptal accessory pathway as per Arudas criteria [2]. We report an Electrocardiogram manifest of classic subepicardial pathway arising from middle cardiac vein.

We report a 50-year-old lady presented with history of recurrent palpitations of 2 years duration. No past history of any cardiac disease. Baseline ECG (Figure 1) showed evidence of pre-excitation with positive delta wave in leads I, AVL, V1-V6 with negative delta wave in leads II, III, AVF. A distinctive ECG clue for the presence of an epicardial AP was a steeply negative delta wave in lead II. Electrophysiological studies confirmed subepicardial pathway arising from middle cardiac vein and successful ablation of the pathway done. Since we localized the pathway as epicardial pathway on ECG by applying Arudas criteria, coronary venous sinus angiography done and ablated by left-sided approach by transseptal puncture, stressing the importance of ECG localization.

References

1. Arruda MS, Beckman KJ, McClelland JH (1994) Coronary sinus anatomy and anomalies in patients with posteroseptal accessory pathway requiring ablation within a venous branch of the coronary sinus. *J Am Coll Cardiol* 24: 535.
2. Arruda M, Wang X, McClelland J. ECG algorithm for predicting radiofrequency ablation site in posteroseptal accessory pathways. *PACE* 199.