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Background

Fascicular ventricular tachycardias (FVT), arise from the left posterior fascicle, left anterior fascicle, or the left upper septal fascicle in both structurally normal and abnormal hearts¹. To our knowledge, no association between FVT and cardiomyopathy has been established.

Case

A 67-year-old woman with prior ischemic stroke presented from clinic with tachyarrhythmia. She was asymptomatic and tachycardic on admission. Electrocardiogram (EKG) showed anterior FVT (Figure 1). Echocardiogram showed an ejection fraction (EF) of 35% with regional wall motion abnormalities (RWMA) in an inferobasal distribution, elevated pulmonary artery systolic pressure, dilated left and right atrium.

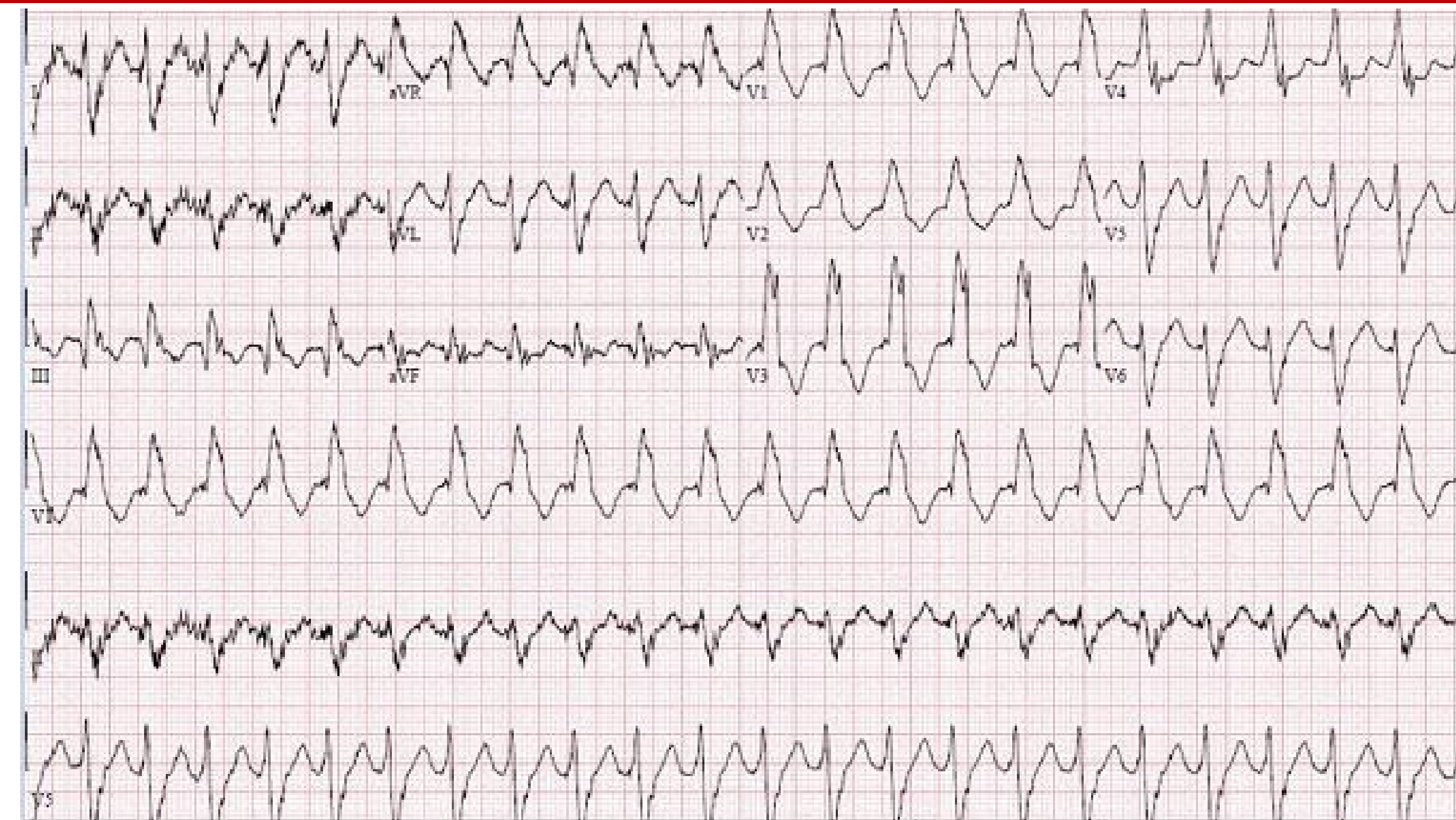


Figure 1A): EKG showing anterior fascicular ventricular tachycardia.

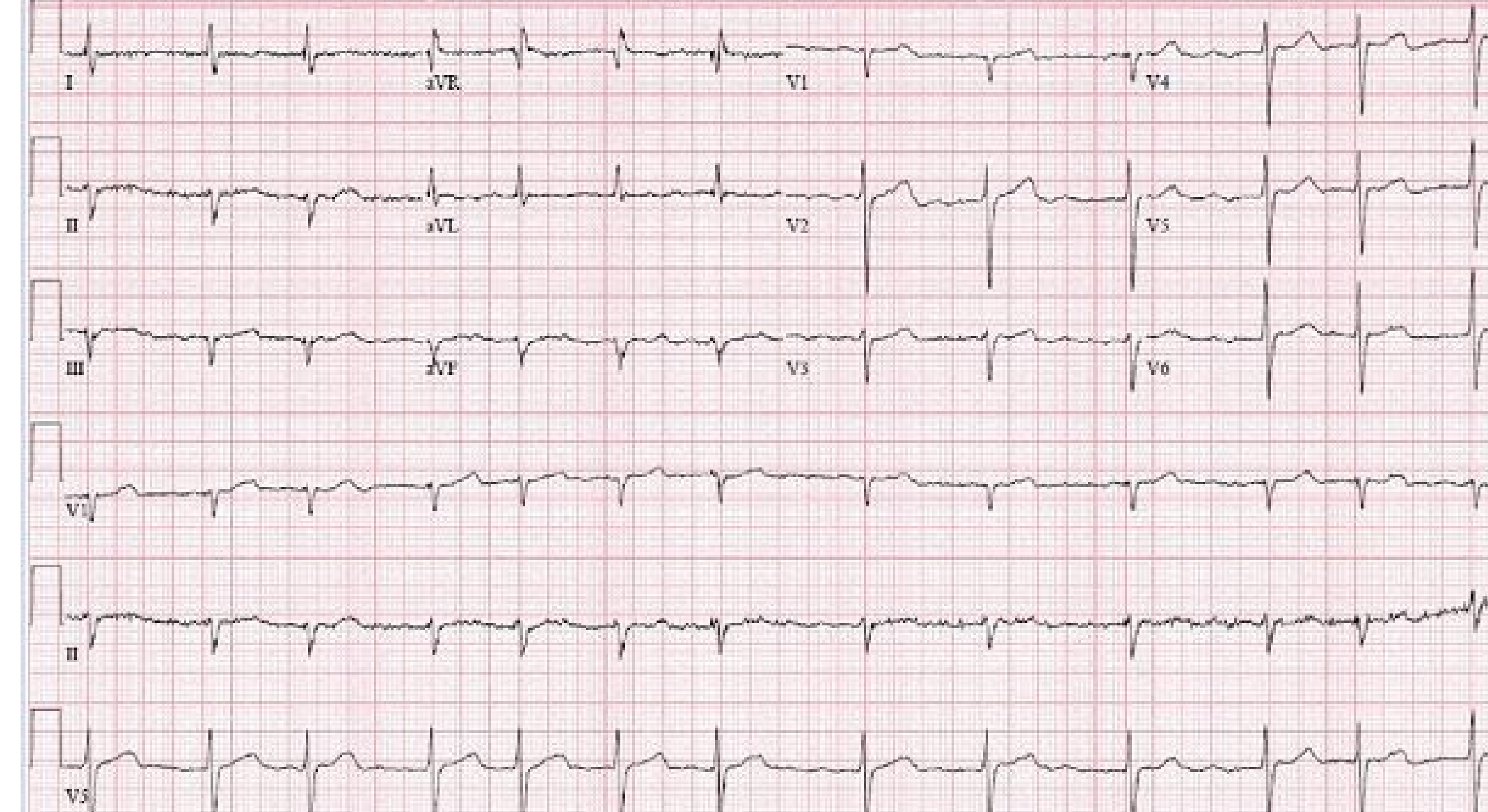


Figure 1B): EKG showing persistent atrial fibrillation without aberrancy.

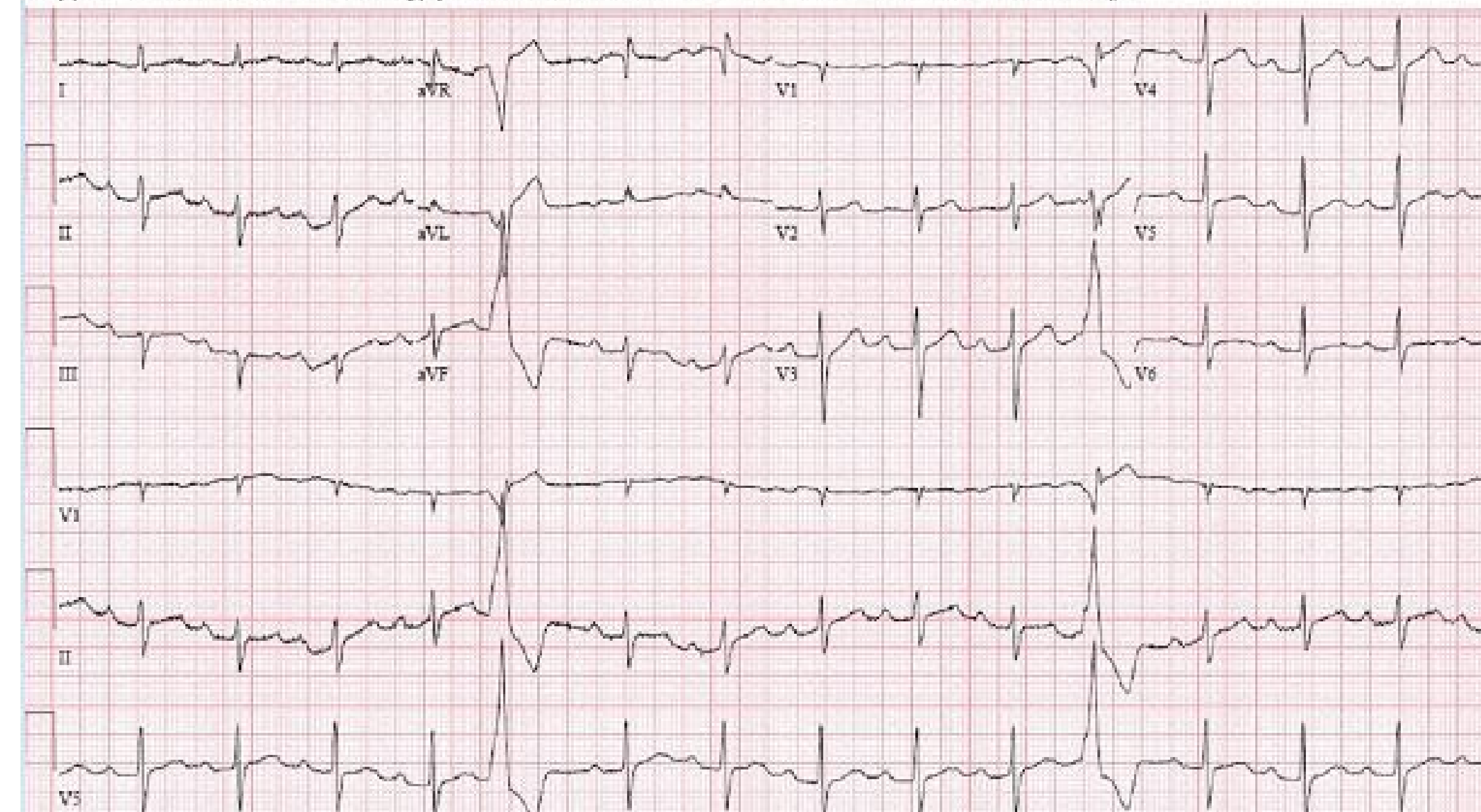


Figure 1C): EKG post-cardioversion showing return to sinus rhythm with few pre-mature ventricular contractions.

Decision Making

Despite the patient's reduced EF, we chose verapamil for arrhythmia termination since she was not in decompensated heart failure and able to tolerate its negative inotropic effects. Verapamil terminated FVT and guideline-directed medical therapy (GDMT) led to immediate recovery of EF. She was later successfully cardioverted to NSR for atrial fibrillation (AF). Aggressive rhythm control was pursued in both cases as simultaneous AF and ventricular tachycardia can potentially have deleterious hemodynamic effects.

Conclusion

A high index of suspicion is necessary to differentiate FVT from AF with aberrancy, as treatment differs between the two. Verapamil can be used in cardiomyopathy to terminate FVT with careful monitoring and consideration.