

Attacks of unknown origin

By Stephen Workman, MD, FRCPC



While working midnights providing internal medicine consultation services, I was asked to see a young patient. He was suffering from narrow complex tachycardia with a rate of 180 beats per minute. The patient had reverted spontaneously to sinus rhythm shortly after arriving. The electrocardiogram (ECG) at rest was normal, without evidence of an accessory pathway. The ECG during the event was also noncontributory (see Figure 1).

The patient, a well-educated, bright professional, presented me with his history. The attacks were slowly increasing in frequency over a ten-year period. They were often short-lived, but recently the attacks had lasted longer. The most recent attack was the longest yet. The patient had learned to spontaneously abort the arrhythmia by performing a valsalva maneuver. The only past history included glaucoma, for which he took timolol once daily in the evening. He was on no other medications, prescription or otherwise, and did not abuse alcohol or street drugs. The patient had no significant past history.

His physical exam was entirely within normal limits. As I was completing the examination, the patient volunteered an intriguing piece of information. “You know, I think it has something to do with my timolol. It seems like every time I take it, my heart starts to race.” I was very confused by this statement. While ophthalmic suspensions of beta blockers can cause asthma attacks, I could not imagine how they were capable of inducing a supraventricular tachycardia (SVT).

I pondered this last point while writing up the history. I returned to the patient to clinch the diagnosis and discuss treatment options.

WHAT'S YOUR DIAGNOSIS?

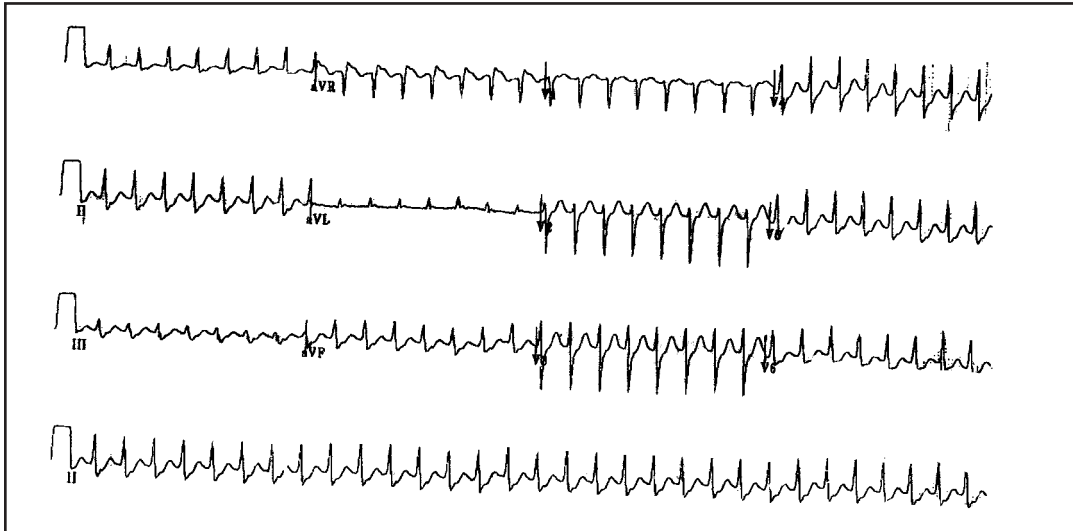


Figure 1: ECG during the event.

What's your diagnosis?


I returned to the patient's bedside and clarified the history. We subsequently determined that his SVT occurred almost exclusively before, not after, he took his timolol eye drops. He was very certain of this fact after recalling carefully his last several attacks. Given the apparent exquisite sensitivity of his SVT to beta blockade, I proposed a trial of very low-dose beta blocker, metoprolol, 12.5 mg orally, twice day. If he tolerated this dose without side effects, any decisions about ablation therapy could be deferred.

He was referred to his family physician for followup. **Dx**

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Are you treating to ratio? 

References: 1. Desprez JJ, Lemieux I, Desprez FR, Cosentino S, Lacombe B. HDL-cholesterol as a marker of CAD risk: the Quebec cardiovascular study. *Atherosclerosis* 2000;153(2):263-75. 2. Fisher JE, Fretzsch JJ, Genest JG Jr, McPherson PF for the Working Group on Hypercholesterolemia and Other Dyslipidemias. Recommendations for the management and treatment of dyslipidemia. *CMAJ* 2002;167(11):1441-7.

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