

## Answer to Quiz on page... : Electrocardiogram

Correct answer is:

### C) Supraventricular tachycardia with aberrancy

The last three beats of the tachycardia (Fig. 1) demonstrate a different, narrow morphology to the preceding wide complex tachycardia. In ventricular tachycardia the QRS morphology is expected to remain wide throughout the arrhythmia. In the current tracing, the rate remains the same but the QRS morphology changes from wide to narrow complex. This supports the diagnosis of supraventricular tachycardia with aberrancy with recovery of conduction through both bundles during the last 2 beats.

Sinus rhythm with bundle branch block is unlikely as the second part of the ECG demonstrates clear P

waves, with morphology consistent with sinus rhythm. If the first part of the tracing was sinus tachycardia, one would expect a gradual rather than sudden decrease in heart rate.

Atrial fibrillation would result in an irregular ventricular rate. The underlying tachycardia is regular, and thus is consistent with atrial tachycardia, atrial flutter, AVNRT or orthodromic AVRT.

Orthodromic tachycardia utilizing a leftsided accessory pathway can be excluded as there is no change in cycle length between the wide complex LBBB pattern (based on the axis in the limb leads) and the narrow complex beats. In the case of a orthodromic AV reentrant tachycardia with a leftsided accessory pathway, the cycle length would be longer with LBBB as activation of the left ventricle and subsequent leftsided accessory pathway is delayed.



Figure 1. Fragment of electrocardiogram

Josh Hawson, Jonathan Lipton  
Royal Hobart Hospital, Hobart, Australia

**Peer-review:** Internal

**Conflict of interest:** None to declare

**Authorship:** J.H. and J.L. equally contributed to preparation of quiz

**Acknowledgement and funding:** None to declare

**Address for Correspondence:** Jonathan Lipton, Royal Hobart Hospital, Hobart, Australia

Email: jonathanlipton@gmail.com

Received: 21.08.2019 Accepted: 21.08.2019

Copyright © 2019 Heart, Vessels and Transplantation

doi: 10.24969/hvt.2019.140