

Organized Ventricular Rhythms



Figure 1.5.26: Image 26, Organized Ventricular Rhythms

Rate determines the name for an organized ventricular rhythm. Ventricular rhythms can be distinguished by their QRS complex length of >0.12 seconds and their absence of P waves.

Ventricular escape rhythm: <40 BPM

Accelerated idioventricular rhythm: 40-100 BPM

Ventricular tachycardia: >100 BPM

A ventricular escape rhythm typically occurs when both the SA and AV nodes have failed, so there is no transfer of electricity from the atria to the ventricles; this forces the ventricles to take over as pacemaker. In a ventricular escape rhythm, the rate is typically 20-40 BPM, there are no P waves, and the QRS complexes are wide and bizarre:



Figure 1.5.27: Image 27, Ventricular Escape Rhythms

In an accelerated ventricular rhythm, the irritable ventricular site that has taken over as pacemaker is contracting at a rate >40, but is not a true ventricular tachycardia. The physiology of this rhythm is similar, but is accelerated due to increased irritability of the pacemaker site:

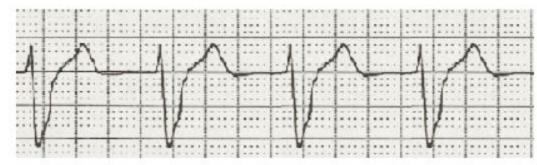


Figure 1.5.28: Image 28, Accelerated Ventricular Rhythms

Ventricular tachycardia is essentially the ventricular version of atrial flutter. With ventricular tachycardia the irritable ventricular site has taken over as pacemaker by depolarizing rapidly. Ventricular tachycardia is not always an indicator that the SA and AV nodes have failed, as is usually the case with ventricular escape and accelerated ventricular rhythms; instead the ventricle has taken over as pacemaker by depolarizing at a rate faster than the SA node.



Figure 1.5.29: Image 29, Ventricular Tachycardia

Ventricular tachycardia is sometimes pulseless, but not always. If you see or suspect ventricular tachycardia, it is important to check a pulse before intervening.

A patient can also have "runs" of ventricular tachycardia. A run of ventricular tachycardia refers to a rhythm that converts from the underlying rhythm to ventricular tachycardia for >4 QRS complexes, then reverts to the underlying rhythm. The reversion is important; it is not a "run" of ventricular tachycardia if it never converts back out of ventricular tachycardia.