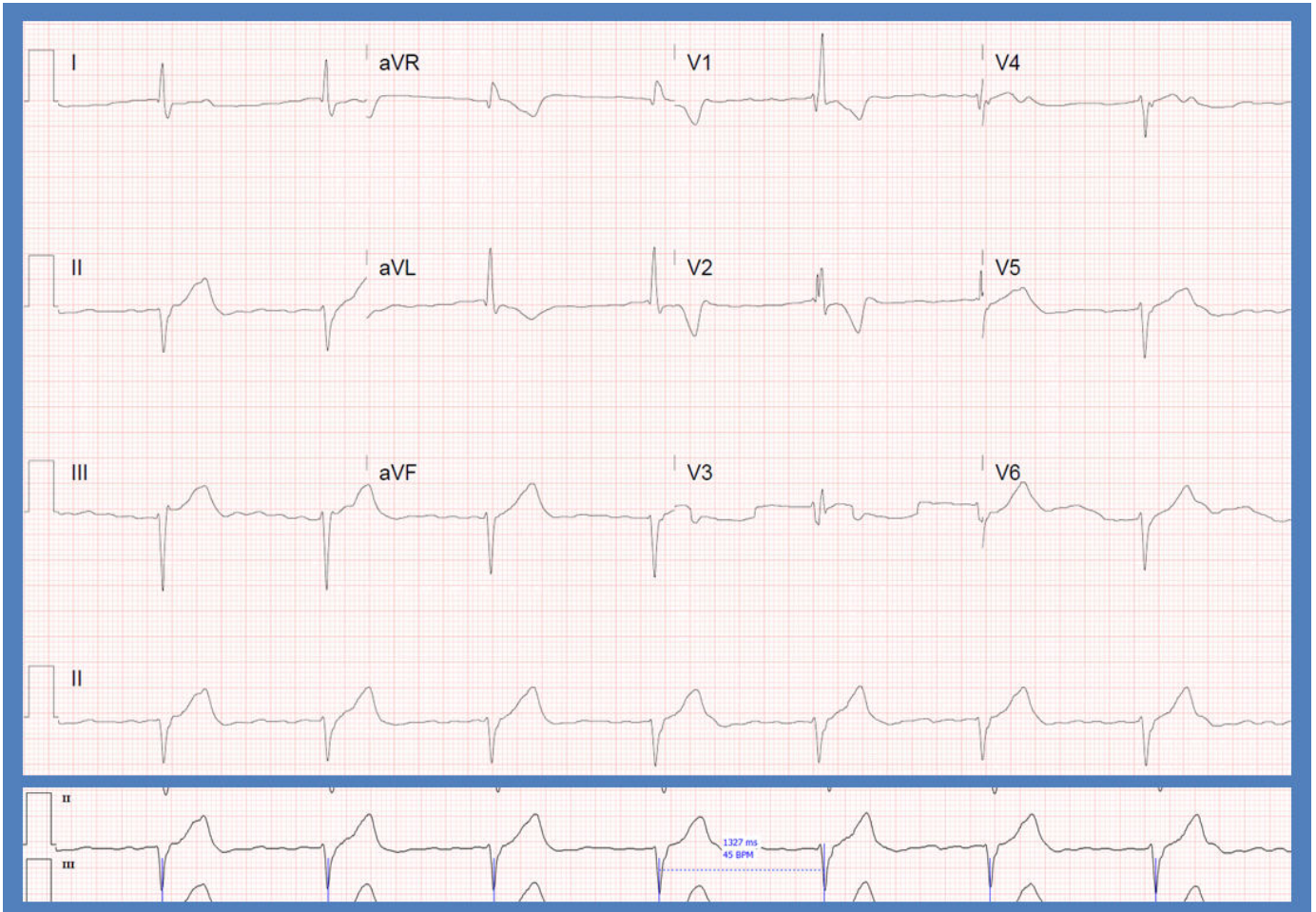


Frederick's Syndrome: *Atrial Fibrillation with Complete Heart Block!*

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Description

The above electrocardiogram (ECG) was obtained in an elderly patient with profound acidosis and multiple electrolyte abnormalities post trauma. The baseline atrial rhythm is atrial fibrillation, with no discernible P waves. However, the ventricular rhythm is regular and bradycardic; most likely a junctional escape rhythm at 45 beats per minute (as shown in the insert rhythm strip). There is incomplete right bundle branch block and left anterior fascicular block with anterior ST and T wave abnormalities suggestive of ischemia.

Discussion

Atrial Fibrillation is a very common arrhythmia which can cause tachycardia and bradycardia depending on the extent of atrio-ventricular (AV) conduction. When the ventricular response is markedly slow and regular due to either medication effect or marked intrinsic AV nodal disease, complete AV block with a junctional escape rhythm is presumed [1]. This rhythm often mandates pacing, often specialized pacing, as it may result in serious symptoms and can progress to life-threatening hemodynamic compromise [2].

An eponym of "Frederick's Syndrome" has been used for this condition [3] based on the description by Leon Frederick, a Belgian physiologist, in 1904 [4]. This condition is associated with left atrial thrombosis, due to the underlying atrial fibrillation causing stasis of blood in the atria [5].

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KEYWORDS: Atrial Fibrillation; Complete Heart Block; Frederick's Syndrome.

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