Arrhythmias - Electrocardiography (ECG)

Prevalence and clinical characteristics of patients presenting with phase 4 atrioventricular block

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Background: The prevalence of phase 4 atrioventricular block (4AVB) is not known.

Objective: To assess the exact prevalence of 4AVB in a population of patients with high-degree AVB.

Methods: All the ECG from patients admitted for high-degree AVB (2 to 1 and complete) were collected at the University Hospital of Nice. The ECG tracings (12-lead surface and telemonitoring during hospitalization) were reviewed by an electrophysiologist.

Results: From Sept 2019 to Sept 2020, 65 patients were admitted for high-degree AVB. 8 patients (12 %) with 4AVB were identified (3 men; 88 ± 5 years). Arterial hypertension was present in 7/8 (87 %), and a syncopal episode - 4AVB-related - was noticed in 6/8 patients (75 %), mean left ventricular ejection fraction 54 ± 13 %. Baseline QRS width and corrected QT intervals were respectively 131 ± 30 ms and 469 ± 34 ms). 4AVB sequence was induced by a: premature atrial contraction (5/8), premature ventricular contraction (1/8), conduction block in a branch (1/8), sinus rhythm acceleration (1/8). All patients received a dual-chamber pacemaker during hospitalization.

Conclusion: The exact prevalence of 4AVB is not rare (12 %), and may be underestimated. 4AVB is usually observed in an elderly population, treated for arterial hypertension, and with baseline conduction disorders.

Abstract Figure. Phase 4 AVB induced by PAC

