

**A SYNCOPE REVEALING AN ASYMPTOMATIC ACUTE CORONARY SYNDROME****Safia Ouarrak, MD\*, Amine Kherraf, MD, Adam Fadoul Tahir Fadoul, MD, Mahamadou Charfo Bacharou, MD, Salim Arous, MD and Rachida Habbal, MD**

Department of Cardiology, University Hospital of Ibn Rochd, Casablanca, Morocco.

**\*Corresponding Author: Dr. Safia Ouarrak**

Department of Cardiology, University Hospital of Ibn Rochd, Casablanca, Morocco.

Article Received on 19/05/2021

Article Revised on 09/06/2021

Article Accepted on 29/06/2021

**ABSTRACT**

This report describes the case of a 60-year-old man whose electrocardiogram showed a complete atrioventricular block associated to an elevation of ST segment in the inferior leads with hyperacute T waves in precordial leads V1-V3. This electrocardiographic pattern corresponded to a complete atrioventricular block complicating a STEMI due to the right coronary artery occlusion.

**KEYWORDS:** Electrocardiogram, Atrioventricular block, Acute coronary syndrome, Syncope.**CASE REPORT**

A 60-year-old non-smoker man with a history of dyslipidemia and diabetes mellitus on insulin, admitted to the cardiac intensive care unit after an out-of-hospital syncope. The patient denied any chest discomfort, dyspnea, fatigue or nausea. He was hemodynamically stable, with a correct capillary blood glucose. The electrocardiogram showed a high degree atrioventricular block (AVB) associated to ST segment elevation in the inferior leads with hyperacute T waves in precordial leads V1-V3 (Figure 1A). Ultimately, the diagnosis of a high degree AVB complicating an asymptomatic STEMI was made. The patient was immediately admitted to the catheterization laboratory (Video). The ECG post reperfusion showed a total regression of the AVB with a normalization of ST segment (Figure 1B).

**DISCUSSION**

Asymptomatic STEMI is a rare event, only two previous reports have revealed an ongoing asymptomatic STEMI.<sup>[1]</sup> The incidence of high atrioventricular block (AVB) among STEMI patients ranged from 2% to 13% rising to 28% in case of inferior STEMI.<sup>[2]</sup> Inferior infarct location and diabetes are predictors to develop a high AVB in STEMI patients.<sup>[3]</sup> That was the case of our patient.

In the other hand, the QRS complexes are not widened, and tall T waves are seen only in the precordial leads, excluding the hypothesis of hyperkalemia. Early repolarization should not be evoked in this context.

An urgent coronary angiography was performed and showed an occlusion of the right coronary artery (RCA) that was successfully treated with coronary angioplasty (Video).

The atrioventricular nodal artery normally arises from the RCA. The ischemia caused by STEMI is sufficient to cause cardiac conduction disorders.

However, the pathophysiology of asymptomatic STEMI is still poorly understood. A retrospective analysis demonstrated that painless STEMI is more common in diabetics, women, non-smokers, normolipidemics, and the elderly, and that asymptomatic STEMI is associated with worse prognosis than painful STEMI.<sup>[1]</sup>

This case highlights the importance for early revascularization when the ECG shows STEMI, even in the absence of symptoms with a high risk for silent STEMI, so to prevent severe complications as a high AVB.

**Figure legends**

**Figure 1.** (A) The 12-lead ECG performed on presentation to the emergency unit showing a high AVB with ST segment elevation in the inferior leads. (B) Electrocardiogram after revascularization.

**Video.** Cardiac catheterization revealing RCA occlusion.

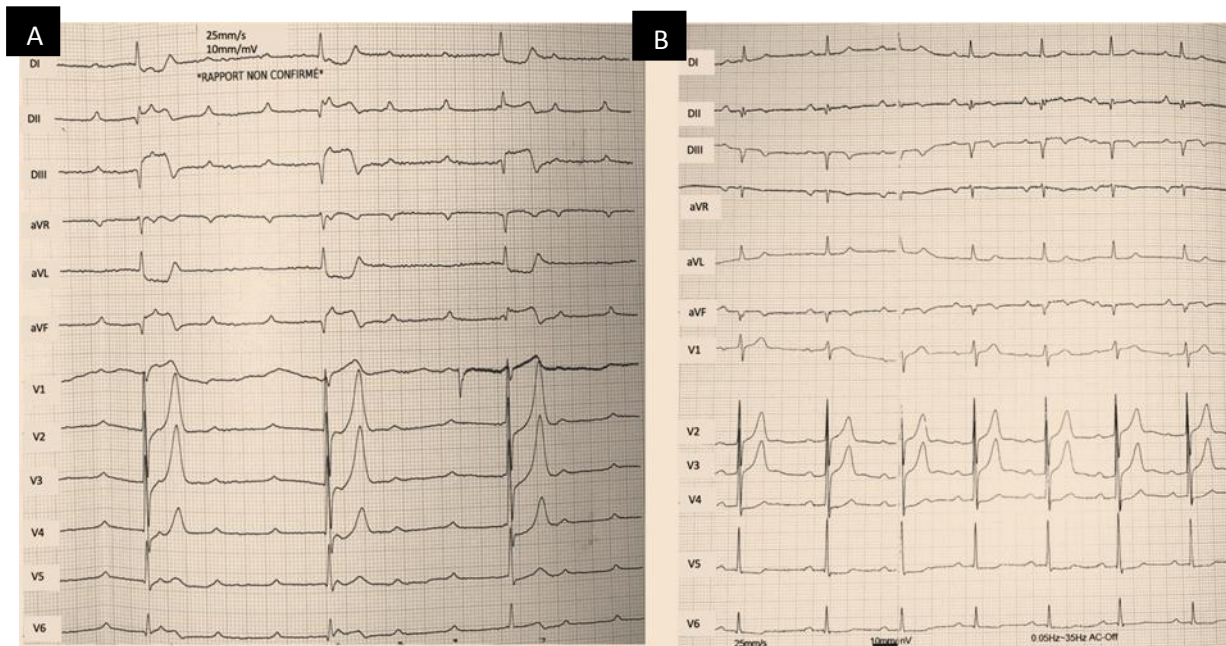
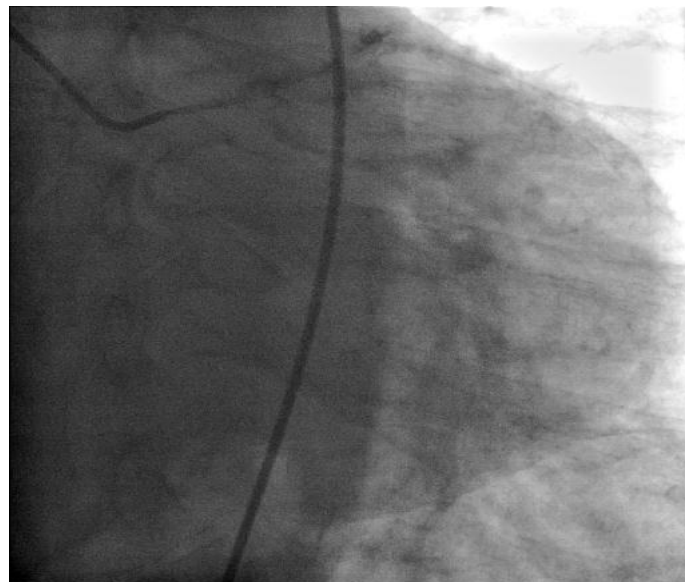


Figure 1

**Acknowledgements**

None.

**Funding sources**

None.

**Disclosures**

None declared.

**REFERENCES**

1. Anderson KL, Shah NA, Gallegos M, Chiang I-H. Asymptomatic ST elevation myocardial infarction. *Heart Lung*. juill, 2018; 47(4): 363-5.
2. Tans AC, Lie KI, Durrer D. Clinical setting and prognostic significance of high degree atrioventricular block in acute inferior myocardial infarction: a study of 144 patients. *Am Heart J*. janv, 1980; 99(1): 4-8.
3. Chera HH, Mitre CA, Nealis J, Mironov A, Budzikowski AS. Frequency of Complete Atrioventricular Block Complicating ST-Elevation Myocardial Infarction in Patients Undergoing Primary Percutaneous Coronary Intervention. *Cardiology*, 2018; 140(3): 146-51.