Pneumopericardium: A Case Report

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Abstract

Pneumopericardium is a rare but not exceptional condition. It represents the presence of air in the pericardial space. We report a case of pneumopericardium in a 21-year-old girl secondary to a road traffic accident.

Keywords: Pneumopericardium; Trauma.

Introduction

Pneumopericardium is defined as the presence of air within the pericardial space. Usually, it is a complication of blunt or penetrating chest trauma, but rare iatrogenic and spontaneous cases have been reported [1]. We report the case of a 21-year-old girl admitted to the emergency department for road traffic injury with a favourable outcome.

Clinical case

The patient was a 21-year-old girl with no previous history, admitted to the emergency room for trauma without loss of consciousness from the road after driving off the road at about 80km/h in a rollover. The patient was conscious, GCS 15/15, and hemodynamically stable on examination.

There was a rip wound on the right hand that could not be saturated and some leg abrasions: but no cervical or lumbar spine pain. The cardiopulmonary examination is without anomalies.

The Electrocardiogram (ECG) showed a regular sinus rhythm at 80 beats/min, an average PR interval, and no specific repolarization disorder (Figure 1). The chest X-ray was normal. The body scan showed a few anterior pericardial air bubbles with no fluid effusion (Figure 2-3); otherwise, an unremarkable examination. The Transthoracic Echocardiography (TTE) and the biological work-up were routine. The diagnosis of pneumopericardium was made. The patient was monitored for 48 hours without complications.

Discussion

Pneumopericardium is a rare but not exceptional condition. In 1910, Wenkebach first described the radiological findings of pneumopericardium; in 1967, Cimmino described the diagnostic features of pneumopericardium [2]. It is a pathology that can occur in the context of trauma, as in our case. However, other etiologies have been reported in the literature. Toledo et al. [3] classified the aetiology of pneumopericardium into four categories: iatrogenic, pericarditis, fistula formation between the pericardium and an adjacent air-containing organ, and trauma, as in our case. In addition, Cummings et al. [4] have reported that positive pressure ventilation is also a cause of pneumopericardium. Its management can vary from simple monitoring with therapeutic abstention, as in our patient’s case, to surgical treatment by pericardial drainage.

Conclusion

Pneumopericardium is a reality despite its rarity in our practice. However, in the face of any trauma, it should be considered, and a complete work-up should be performed.

Note on consent

The patient’s consent was obtained.

Conflicts of interest

The authors have declared no conflicts of interest.

Authors’ contributions

All authors contributed to the development of this case, and we have their full approval for the publication of this article.

References