

Letters to the Editor

Tracheal Compression Secondary to Posterior Sternoclavicular Dislocation[☆]**Compresión traqueal secundaria a una luxación esternoclavicular posterior**

To the Editor:

Posterior sternoclavicular dislocation (PSCD) is uncommon but may cause severe mediastinal injury. We report the case of a patient with PSCD and symptomatic tracheal compression requiring surgical intervention. This was a 16-year-old male with direct chest injury presenting with pain in the right shoulder and cough forty-eight hours after the event. On physical examination, deformity of the sternoclavicular joint and limited abduction (90°) was observed. The chest X-ray showed posterior sternoclavicular dislocation. Closed reduction was performed and the joint was immobilized with a sling. Fifteen days later, cough, stridor and breathing difficulties persisted. Computed tomography (CT) confirmed right PSCD with severe tracheal compression (Fig. 1).

vein, innominate artery, trachea, bronchi and esophagus.³ Diagnosis is based on history, physical examination and radiology.⁴ Physical examination reveals loss of joint congruency, sternoclavicular depression, pain and functional impotence. Other symptoms are derived from the affected mediastinal structures: venous congestion, dysphagia, cough, dyspnea and stridor.¹ Chest X-ray should be the initial examination undertaken (dislocation, costoclavicular fracture, pneumothorax, pneumomediastinum).⁴ Echography has been shown to be useful, but is not commonly used. CT is the test of choice for confirming PSCD and for excluding mediastinal complications.^{1–4} Magnetic resonance imaging can be performed in patients who are allergic to contrast media. Fiberoptic bronchoscopy is not essential for diagnosis. Treatment varies depending on the time since the event and associated injuries. Orthopedic intervention, consisting of closed reduction, is applied in PSCD within 48 h of the event in the absence of mediastinal complications. However, this procedure fails in up to 50% of cases, with recurrence or unstable anterior subluxation.¹ Surgical treatment



Fig. 1. Axial and sagittal computed tomography slice showing posterior displacement of the clavicular head with tracheal compression.

Surgery consisted of reduction and stabilization with cerclage wiring. The respiratory symptoms resolved.

Dislocation of the sternoclavicular joint is rare (<1%) due to the strength of the ligaments. It occurs in young people under the age of 25, the most common cause being traffic accidents (40%). A total of 95% are anterior, since the posterior ligaments are thicker and stronger than the anterior ones.¹ PSCD is caused by anterior trauma to the clavicle (direct mechanism) or posterolateral trauma to the shoulder (indirect mechanism).² Up to 30% of PSCD affect mediastinal structures such as the brachial plexus, brachiocephalic

consists of reduction and stabilization, and is indicated if more than 48 h have elapsed after the injury, if closed reduction fails, if the joint is unstable, or if there is recurrence of the PSCD and mediastinal injury. Numerous stabilization techniques have been described, including fixation with nails or wire, joint reconstruction with subclavian tendon, sternocleidomastoid muscle and fascia lata (tenodesis), costoclavicular-clavicoasternal cerclage and resection of the medial third of the clavicle.⁵ Late diagnosis and lack of treatment are often associated with complications such as arthritis, tracheoesophageal fistula or thoracic outlet syndrome.^{1,2} PSCD involving injury of the trachea is very uncommon. It should be suspected in patients with clavicle or shoulder injury who present respiratory symptoms. Diagnosis is based on CT and the treatment of choice is surgical reduction and stabilization.

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Inflammatory Tracheal Pseudomembrane[☆]



Seudomembrana traqueal inflamatoria

To the Editor:

We read with great interest the recent article from Crespo-Lessmann and Torrego-Fernández in which they present a patient with obstructive inflammatory tracheal pseudomembrane (in the form of a tracheal septum) secondary to repeated endotracheal intubations. In their article, the authors describe the complete resolution of the process with respiratory physiotherapy and the administration of anti-inflammatories (glucocorticoids).¹

Obstructive fibrinous pseudomembrane is a rare condition, but probably more common than reported in the literature. It originates from ischemia of the tracheal mucosa, usually due to iatrogenesis, inducing the production of growth factors and abnormal regeneration.² This results in the formation of a fibrous membrane that partially obliterates, and in some cases, even totally obstructs the tracheal lumen.³ As the authors indicate, these acquired inflammatory lesions can resolve spontaneously after a certain length of time. However, the central airway is frequently compromised and urgent endotracheal intervention is required.

We report here our experience with a 69-year-old male non-smoker who had undergone surgery for herniated disc in the lumbar spine, requiring general anesthesia and orotracheal

intubation. The procedure was carried out with the patient in the prone position, thus increasing endotracheal tube cuff pressure. During the immediate post-surgical period, the patient suffered respiratory arrest and was reintubated. A flexible bronchoscopy was performed, revealing a partially detached circumferential fibrinous pseudomembrane causing stenosis of the entire upper third of the tracheal lumen (Fig. 1A). A fragment of approximately 2 cm that was acting as a valve and may have caused the patient's respiratory arrest was removed with the biopsy forceps during the same procedure. To gain better control of the airway after extraction of the pseudomembrane a rigid bronchoscopy was performed, during which the tracheal lesion was extracted en bloc using the bevel of the tracheoscope (EFER-DUMON® caliber 14 mm) (Fig. 1B). The patient subsequently progressed favorably and could be extubated a few hours later (Fig. 1C). In the case presented by Crespo-Lessmann and Torrego-Fernández,¹ the tracheal septum may have originally been a fragment of circumferential pseudomembrane. In their case, the evolving nature of the condition and the clinical picture could have permitted conservative treatment.

Obstructive tracheal pseudomembrane, therefore, must be diagnosed with endoscopy as soon as possible after clinical suspicion has been aroused. Endoscopic monitoring would be advisable in patients who have required prolonged or repeated endotracheal intubations. Since severe respiratory complications are common, therapeutic endoscopy is required in the majority of the cases

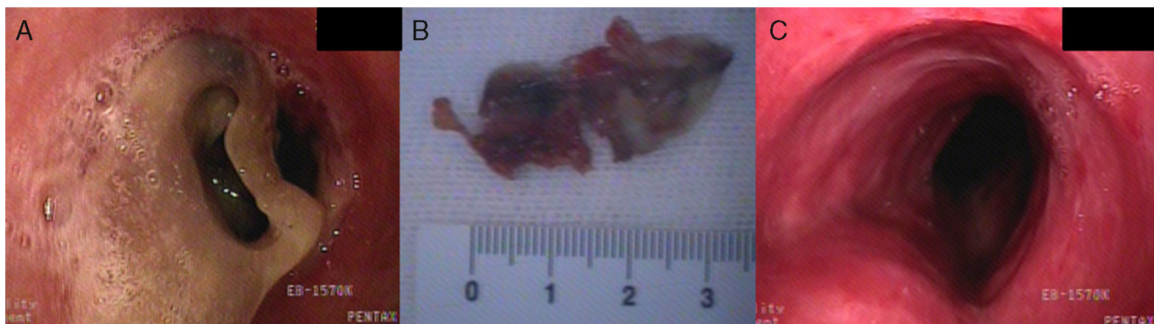


Fig. 1. (A) Circumferential fibrinous pseudomembrane. (B) Tracheal lesion. (C) Patient extubation.

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