

Distal Bronchial Rupture Secondary to an Accidental Fall

Rotura bronquial distal secundaria a caída accidental

To the Editor:

Bronchial rupture is an uncommon condition, mainly secondary to severe thoracic traumatism due to traffic accidents.¹⁻³ The bronchus that is mainly affected is the right, due to its being subjected to greater tension due to its larger diameter, while the left bronchus is more protected by the surrounding tissue and organs. Transversal ruptures are the most frequent, found in 80% of the cases to be proximal at less than 2.5 centimeters from the tracheal carina,²⁻⁵ while bronchial ruptures that affect the segmental bronchi are extremely rare. It is a serious entity with high morbidity and mortality, requiring on most occasions surgical resolution. We present the peculiar case of a patient with distal rupture of a segmental bronchus of the middle lobe after chest trauma secondary to a fall managed with conservative treatment.

The patient is a 46-year-old male with no personal medical history of interest, who was admitted to the Intensive Care Unit at our hospital due to polytrauma after accidentally falling off the roof of the warehouse where he was working. Physical examination revealed facial trauma, hematoma on the left flank and crackling upon palpation of the left hemothorax. Upon auscultation, abolition of the overall vesicular murmur was observed. Body map by means of computed axial tomography scan produced the following findings: fracture of the left ilium, acetabulum and branches; fracture of the lateral wall of the left maxillary sinus; multiple left rib fractures; anterior, mid and posterior pneumomediastinum and bilateral pneumothorax, greater on the right side, with images of bilateral lung contusion.

Emergency bronchoscopy was performed in order to explore the airway. In the right bronchial system, in the medial segmental bronchus of the middle lobe, we observed a circumferential loss of continuity in the mucosa, leaving a small space of half a centimeter with reddened mucosa corresponding with peribronchial tissue, compatible with rupture of the medial segmental bronchus of the middle lobe (fig. 1). As it was a distal rupture and the patient was hemodynamically stable, the thoracic surgery team decided on a conservative management of the lesion. Bronchoscopy was repeated three days later, observing no changes.

The patient was transferred to the trauma hospital ward 25 days after hospitalization. At that time, bronchoscopy was repeated, which revealed exophytic tissue obstructing the most medial segment of the middle lobe with a valvular effect (on inspiration, there was a small opening where the subsegmental division could be seen). This could have corresponded with an intrabronchial evagination of the peribronchial tissue after the avulsion of the segmental bronchus. The patient evolved favorably and was discharged two months later.

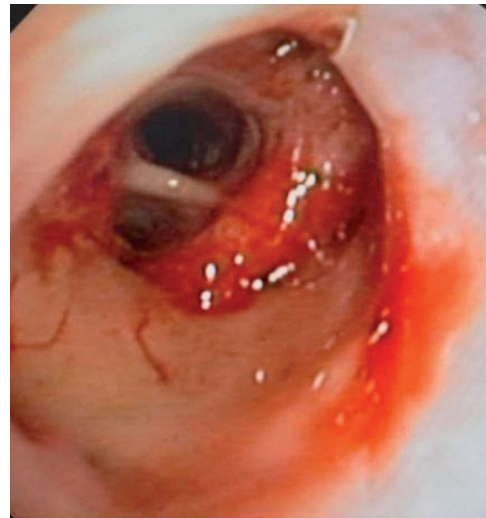


Figure 1. Medial segmental bronchus of the middle lobe.

In conclusion, bronchial ruptures are uncommon entities that are mainly produced in polytraumatized patients, entailing the association of lesions of important severity. The clinical manifestations are variable and unspecific and should be suspected in cases of pneumothorax or pneumomediastinum that do not improve despite adequate treatment. Diagnosis is difficult and frequently late, and bronchoscopy is used as the diagnostic method of choice. The first treatment option is surgery, although other treatments can be proposed depending on the location of the lesion and the characteristics of the patient, as in this case that we have presented.

References

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