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Endobronchial "Vertebrae" Causing Recurrent Pneumonia

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77 year old man, with history of dementia and repeated respiratory infections for the past 8 months. He was hospitalized due to pneumonia without improvement after antibiotherapy. The chest radiography showed bilateral parenchymal infiltration in the lower half of the left hemithorax and lower third of the right hemithorax. Flexible bronchoscopy was performed, displaying a foreign body housed in the left main bronchus (LMB) (Figure 1), promptly removed with toothed forceps, without complications. Once exteriorized, it was found that it was a bone, probably from a bird, more specifically a vertebrae (Figure 2). After foreign body removal, there was clinical improvement with pneumonia's resolution.

About 75% to 85% of all foreign body aspirations occur in children, and in the USA accounted for 7% of all accidental deaths per year in children under 4 years old [1]. Although rare in adults, several factors contribute to increase the foreign body aspiration incidence, especially in the elderly, such as alcohol or sedatives abuse, dementia and neurological disorders, convulsions, general anaesthesia, intoxication and dental prosthesis interventions. Laryngectomy and tracheostomy also increases foreign body aspiration risk [2]. Bones are the most frequently aspirated objects and are found in the left bronchial tree in about 32% of patients (7.9% in LMB) [3]. The average time between aspiration and endoscopic removal is one week.

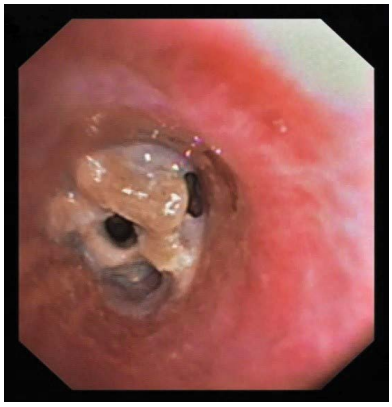

Figure 1: "Vertebrae" housed in the left main bronchus. It is visible the vertebral foramen.

Figure 2: "Vertebrae" after bronchoscopic removal. Scale in centimetres.

In this case, although the significant size of the foreign body, occupying the whole LMB diameter, the vertebral foramen allowed passage of air and secretions, thus preventing atelectasis. For this reason, for the highly frequent aspiration pneumonia in elderly patients with dementia, and the invisibility of the foreign body on chest X-ray, the case dragged on for eight months until the definitive diagnosis, despite the favourable outcome.

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