How to save a pyramid- bronchial anastomosis in subtotal left main bronchus stenosis

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Introduction

Tracheobronchial tuberculosis (TBTB) is reported in approximately 10% to 39% of the patients with pulmonary tuberculosis.

Tracheobronchial stenosis is one of the most common long term complications of TBTB resulting in significant morbidity.

The diagnosis of TBTB is often delayed due to its non-specific clinical symptoms. The course of endobronchial tuberculosis is highly variable and can range from complete resolution of the disease to fibrotic central airway obstruction

Case presentation

46 y.o male
Pulmonary TB diagnosed in March 2021- successful treatment in November
Clinical presentation: moderate-effort dyspnea, expiratory wheezing

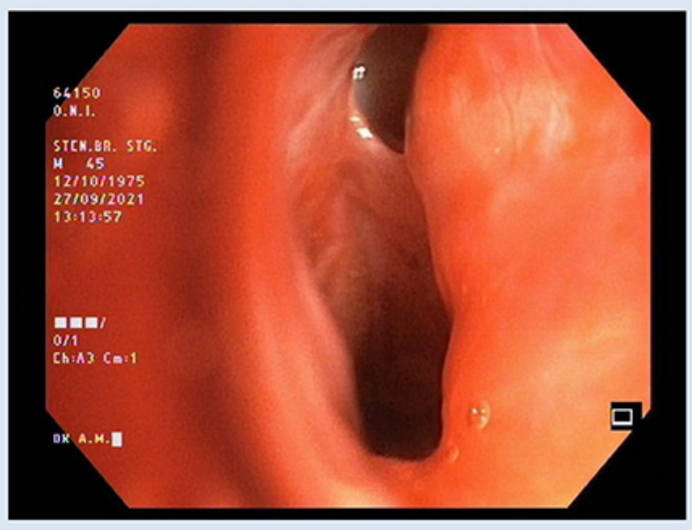
Preoperative evaluation:

Thoracic CT – left upper lobe atelectasis associated with chronic pulmonary lesions in S6- lamellar atelectasis and bronchiectasis

Spirometry and body plethysmography

Cardiac evaluation and echocardiography – sinus bradycardia

Bronchoscopy – left main bronchus stenosis, starting at the second cartilage (3-4 mm), that continued with left upper bronchus stenosis



Results

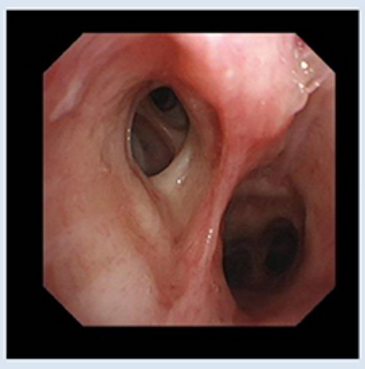
Left upper lobectomy and S6 segmentectomy was performed, associated with bronchial sleeve.

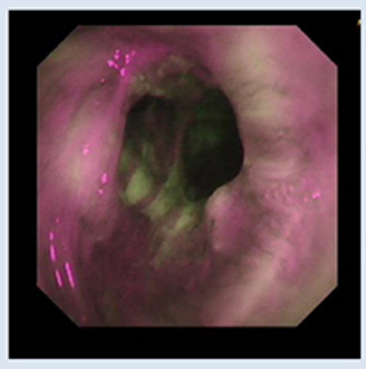
The bronchial anastomosis was performed between the first cartilage of the main left bronchus and the left lower bronchus.

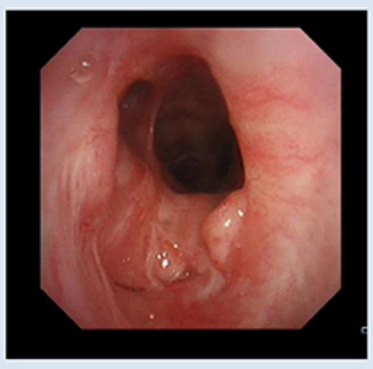
Immediate evolution was slowly favorable, due to persistent air leakage and the necessity of pulmonary lavage through bronchoscopy.

Late evolution was favorable.

Further bronchoscopies were performed in order to evaluate the anastomosis.







Conclusions

Surgery is the only viable treatment in the cases of destroyed lung parenchyma due to tuberculosis

Patients with pulmonary tuberculosis presenting with continued respiratory symptoms after treatment should be evaluated for tracheobronchial stenosis.

Interventional bronchoscopic approaches should be considered to restore airway patency, but the many cases require surgical intervention to restore ventilation in the unaffected pulmonary areas.

References

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