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CASE REPORT

NEGLECTED OESO-TRACHEAL FISTULA ON A FOREIGN BODY: A CASE REPORT

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ABSTRACT

Introduction: Oeso-tracheal fistula (OTF) is an abnormal communication between the trachea and the oesophagus. It is usually secondary to a congenital malformation but rarely due to a foreign body. This study will report an Oeso-tracheal fistula due to the inhalation of a foreign body that has been neglected for 22 years.

Clinical case: It is a 24-year-old student born in a non-consanguineous marriage, the second in 4 children, from a low socioeconomic level in Marrakech who has antecedently inhaled a neglected metallic foreign body at the age of 2, and is present here for chronic bronchorrhea that has been developing for 5 years, and recurrent pulmonary infection with the notion of a false route during the deglutition that appeared 6 months ago. Thoracic CT scan and bronchial fibroscopy demonstrated a metallic foreign body at the level of the right bronchus, with dilatation of the cylindrical bronchi type concerning the middle lobe associated with an oeso-tracheal fistula of a sub-carinally topography. The pre-surgical preparation was antibiotic treatment and bronchial drainage as respiratory physiotherapy ; A thoracic surgical intervention with left selective intubation was taken, and a right posterolateral thoracotomy was performed in addition to the spotting and extraction of the foreign body by bronchotomy with dissection and liberation of the fistula margins and padding of the oeso-tracheal fistula. The postoperative follow-up was simple and the short, medium and long term development was marked by a good clinical, biological and radiological improvement with a mean of 14 months.

Conclusion: Oeso-tracheal fistula on foreign bodies are rare, but must be evoked before any penetration syndrome, and especially before any antecedent of foreign body inhalation. Esophageal and bronchial endoscopy, as well as thoracic CT scan enable lesion and topography diagnosis. The treatment remains surgical and sometimes endoscopic.

KEYWORDS: oeso-tracheal fistulas - foreign bodies - esophageal and bronchial endoscopy – thoracic CT scan- thoracotomy - interventional endoscopy.

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INTRODUCTION

Oeso-tracheal fistula (OTF) is an abnormal communication between the trachea and the oesophagus, it is usually secondary to a congenital malformation but rarely due to a foreign body. The triad of Helmsworth and Pryles summarizes the clinical picture, while the oesophageal and bronchial endoscopy and the thoracic CT scan enable the lesion and topography diagnosis. The

treatment is majorly surgical, but can sometimes be endoscopic. In this study we report a case of oesotracheal fistula due to the inhalation of a neglected foreign object for 22 years.

CLINICAL CASE

This patient is a 24-year-old student by profession and from a non-consanguineous marriage, 2nd of a family of 4, originally from Marrakech and of low socioeconomic level. who consults for chronic bronchorrhea evolving for 5 years and of repeated pulmonary infection with notion of false route during swallowing appeared 6 months ago and having as antecedent inhalation of a neglected metal foreign body at the age of 2 years, it is the brake of the belt of a manual watch of the father of the patient, the general clinical examination of the patient is without particularity, the pleuropulmonary examination notes of the right basithoracic ronflants, At the radiological assessment one note the presence of a foreign body at the level of the right bronchus with dilatation of the bronchi of the cylindrical type interesting the middle lobe associated with an oesotracheal fistula of suscarinary topography to the thoracic CT scan[fig 1-4]. Bronchial fibroscopy revealed an oesotracheal fistula located 2 cm above the carina with a quadrangular metal-like foreign body embedded in the mucosa of the right bronchus, the attempt to Endoscopic extraction of the foreign body was considered very difficult because of the deep entrapment of the foreign body in the bronchial mucosa and the association with an oesotracheal fistula requiring thoracic surgery. the patient was referred to us for additional care. After studying the patient's file within our training with a preoperative clinical and biological evaluation, and a preoperative preparation by antibiotherapy and bronchial respiratory physiotherapy, a decision of thoracic surgical intervention with selective left intubation was made with as the first pathway, a right posterolateral thoracotomy passing through the 5th right intercostal space with muscular sparing, which allowed us the time of surgical exploration to discover a suscarinary oesotracheal fistula and a detection of the foreign body at the level of the mucosa of the right bronchus, we proceeded to extract the foreign body by bronchotomy perpendicular to the bronchial axis with a location and release and padding of the banks of the oesotracheal fistula and set up an intercostal muscle flap and a lobectomy typical average , since the middle lobe was bronchial dilatation seat, was performed[fig5-8]. The postoperative follow-up was simple and the post-operative course in the short, medium and long term was marked by a good clinical, biological and radiological improvement with a 14-month follow-up.

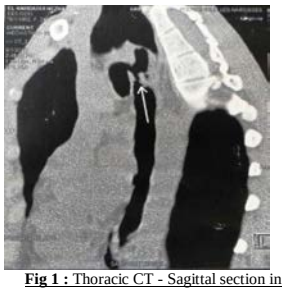

Fig 1 : Thoracic CT - Sagittal section in Mediastinal window showing oesotrachea fistula.

Fig2 : Thoracic CT - axial section in Mediastinal window showing oesotracheal fistula.

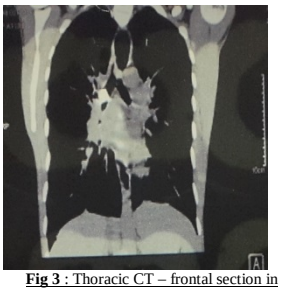

Fig 3 : Thoracic CT – frontal section in Mediastinal window showing the FB at th level of The right bronchus strain.

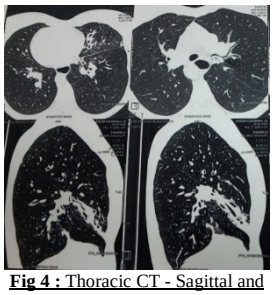

Fig 4 : Thoracic CT - Sagittal and axial section showing a cylindrical DDB of the middle lobe

Fig 5: intraoperative picture of oeso-tracheal fistula after setting on lake.

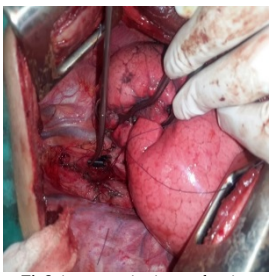

Fig6: intraoperative image showing bronchotomy and control of the foreign body.

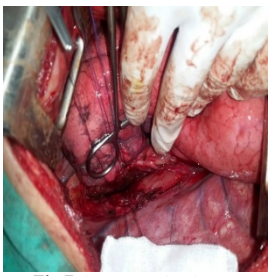

Fig 7: intraoperative image showing the padding of the oeso-tracheal fistula.

Fig 8: image of the foreign body after extraction.

DISCUSSION

Oesotracheal fistula (OTF) is defined by the existence of abnormal communication between the trachea and the esophagus, it is usually secondary to a congenital malformation but rarely to a foreign body [1]. Pathognomonic clinical symptomatology is essentially represented by the Helmsworth and Pryles triad, associating bouts of coughing, false roads during swallowing with abdominal meteorism and recurrent pneumopathies [1]. Imaging plays an important role in the diagnosis of this pathology, It makes it possible to pose the positive diagnosis and evaluate its impact on the general state, the respiratory and digestive system of the patient and also makes it possible to eliminate differential diagnoses [2]. The oeso-gastro-duodenal transit [OGDT] makes it possible to visualize the fistula in 50% to 70% of the cases (73% after the first attempt and 100% after the third attempt), This one appears in the form of a thin linear and ascending opacification of the esophagus towards the trachea [3], bronchial fibroscopy coupled or not with oesophageal fibroscopy is considered as the cornerstone of the diagnosis because it makes it possible to visualize the lesion and to specify its seat its shape and its extended [1]. During this examination, methylene blue can be injected into the esophagus to see if it appears in the trachea [1]. Finally, endoscopy allows to catheterize

the fistula, which allows to guide the therapeutic gesture [1]. Other methods have been described, especially when bronchial fibroscopy is contraindicated, such as the bubbling test, intragastric oxygen pressure measurement, and thoracic computed tomography (CT). The therapeutic management of isolated oesotracheal fistulas is in surgical rule but may be endoscopic using interventional endoscopic techniques [4,5,6,7,8,9]. It is preceded by a short preparation associating a stop of the feeding, a respiratory physiotherapy of bronchial drainage and a probabilistic antibiotherapy at the beginning and adjusted thereafter according to the antibiogram [1]. The choice of the surgical approach depends on the lesion topography, so a thoracotomy or thoracoscopy is indicated for fistulas located below the 2nd thoracic vertebra (D2), while fistulas located opposite or at the above D2 are managed by conventional cervical surgery or endoscopically. It is described that the catheterization of the esophageal fistula preoperatively under fibroscopy will make its identification easy and will allow the minimum of dissection [1], the surgical procedure consists of a section-ligation of the fistulous tract after extraction of the foreign body and a possible musculo-aponeurotic interposition between the two fistulous orifices [1]. De-epithelialization by electrocoagulation or laser associated with the application of biological adhesives is possible endoscopically [9,10]. Postoperative follow-up is usually simple, but morbidity is sometimes severe, namely, cases of generally transient recurrent paresis, tracheomalacia, atelectasis, gastroesophageal reflux, and motility disorders and stenosis of the esophagus have been reported [1].

CONCLUSION

Oesotracheal fistula on foreign bodies are rare, but must be evoked before any penetration syndrome, and especially before any antecedent of foreign body inhalation. Esophageal and bronchial endoscopy as well as the thoracic CT scan allow the diagnosis of lesion and topography. The treatment remains surgical and sometimes endoscopic.

AUTHORS' CONTRIBUTIONS

The participation of each author corresponds to the criteria of authorship and contributorship emphasized in the Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly work in Medical Journals of the International Committee of Medical Journal Editors. Indeed, all the authors have actively participated in the redaction, the revision of the manuscript and provided approval for this final revised version.

PATIENT CONSENT

Written informed consent was obtained from the patient for publication of this case report.

COMPETING INTERESTS

The authors declare no competing interests.

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