

Case Report

Oeso-Tracheal Fistula on a Forgotten Denture: Diagnosis and Management through an Unusual Clinical Case

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Abstract

If ingestion of a foreign body (EC) is a classic and often crash early diagnosis in children, a severe complication type revealing oesophageal-tracheobronchial fistula is usually the preserve of adults. These are rare clinical situations, but always complex. We report a clinical case of an FTO on dentures forgotten in a Malagasy 46 years revealed by chronic respiratory and digestive symptoms evolving for three years. Treatment was exclusively surgical marked by the failure of a flap interposition costal we oblige to indicate esophageal coloplasty after esophageal bi-exclusion. A complicated surgery with 9.3% mortality but it is still the only suitable technique to our technical platform in Madagascar.

Keywords: Bronchoscopy; Foreign body; Chronic dysphagia; Endoscopy; Esophageal-tracheal fistula; Esophageal perforation; Thoracotomy

Introduction

The Oeso-Tracheal Fistula (OTF) is defined as communications between the esophagus and the trachea or bronchi. These clinical situations are rare, though always complex; require an early diagnosis and a surgical treatment at an optimal time [1]. We report a new case of an OTF on a forgotten denture in a Malagasy adult. Through this observation, which to our knowledge has never been described previously, the authors discuss through a literature review the diagnostic features and therapeutic difficulties encountered while dealing with this type of complication, which is sometimes serious in precarious environment.

Case Presentation

Mr. AH 46 years, of Malagasy origin, was hospitalized for a chronic dysphagia that lasted for three years. Recently, dysphagia was becoming more and more marked for semi-liquid foods with the feeling of “something stuck on it.” The examination had revealed the circumstances of the initial accident of which no detail had been overlooked. Our patient had been invited to an end of the year party with a hearty and watered meal. In the night, he displayed a feeling of choking, breathing and coughing spasms. The acute manifestations yielded rapidly. The next morning, he noticed the disappearance of his dentures. In the following years, a painful wallowing difficulty, a sensation of false passage with bronchorrhea and dysphagia followed by a vomiting, settled gradually to become complete and accompanied by a significant weight loss. These symptoms have been labeled as an infection of the upper respiratory tract treated with anti-inflammatory and antibiotics which evolve in a rather favorable but ephemeral way. The standard radiographic examination of the chest, the only examination available in his region, which had been practiced repeatedly, was considered normal. He was subsequently referred to our center and benefited from an esophageal and bronchofiber scope which found out an oeso-tracheal fistula on an obstacle to 25 cm from the dental arch. The biopsy showed no dysplasia edges of the fistula. The chest CT without contrast confirmed the diagnosis of a foreign body that was embedded in the thoracic esophagus. To remove

the denture and repair the esophageal-bronchial fistula with the interposition of a flap of intercostal muscle, our patient had received a right thoracotomy. At the bronchoscopy check up, the postoperative recovery was marked by a persistent fistula (Figure 1). He had been taken to a bi-esophageal exclusion with a restoration of digestive continuity with esophageal coloplasty in Retrosternal after a period of resuscitation and recharge gastrostomy. The operating result in the short term was simple. A cervical high solid food dysphagia was noted after one month of intervention and the patient had received a session of expansion by candle as well as a progressive disappearance of the symptoms after a six-month decline.

Discussion

The benign and acquired OTF is a disorder described for the first time by John Taillor in 1737 [2]. It is a rare disease and its severity depends on the risk associated with a possible worsening of a pre-existing infectious state, a secondary impact syndrome hypoxémiant respiratory inhalation, and a severe malnutrition condition linked to a chronic dysphagia [1]. The dentures ingestion happened mainly to the elderly (70 years on average) denture wearers [1]. The relatively young age of our patient is a reflection of the lack of oral healthcare of the general population in developing countries like ours.

The esophageal-tracheo-bronchial fistula is secondary to an impaction of a foreign body in the esophagus. It mainly occurs during the ingestion of battery or it happens within the early few hours due to the existence of some corrosive products [3]. In the case of a tight OTF, the communication is often done with the right bronchial tree, rarely with the left, and exceptionally with the adjacent organs (pleura, pericardium, mediastinum vessels) [2]. In our case, the fistula was due to chronic inflammatory phenomena secondary to chronic impaction and denture phagocytosis in the esophageal wall moving towards its fistula in the right bronchus, a distal location justified by the delayed disease progression in our context.

The clinical picture is often dominated by respiratory signs in our case; the warning sign was the combination of both the digestive and

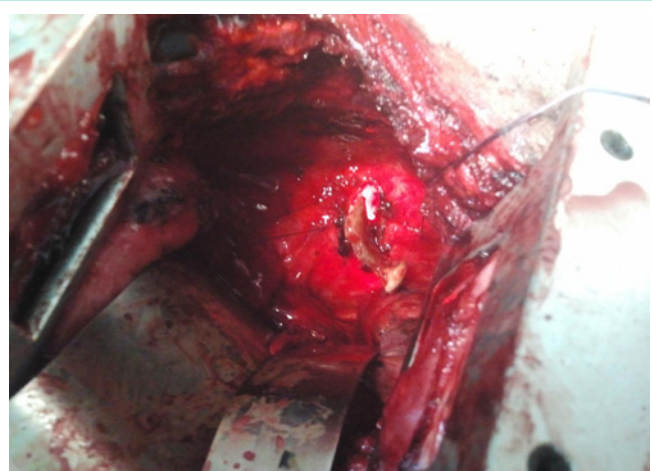


Figure 1: Surgical extraction view of the denture and the esophago-tracheal fistula.

respiratory signs of recurrent events leading to a suspicion of an aerodigestive pathological communication [4]. The diagnosis of an OTF is carried by an esophageal endoscopy which highlights an esophageal perforation. In this case, the esophageal opacification will be carried out with water-soluble contrast medium in take to identify the seat, measure the size, and analyze the fistula tract [5,6]. The sensitivity of this examination in the diagnosis of OTF is 70% [7]. The flexible or rigid bronchoscopy also helps to better identify the orifice of the OTF in the posterior membranous wall. The diagnostic sensitivity can be enhanced by the intra-esophageal instillation of methylene blue in the small fistula, which is difficult to diagnose by the esophageal endoscopy due to the mucosal folds at this member [6]. It will also allow a broncho-alveolar-lavage for a bacteriological examination in the case of complicated OTF of aspiration pneumonia and making the adjustment of a targeted antibiotic therapy of respiratory infections associated happen [6]. As in the case reported by Ben S. M'rad CT scan did not allow us to identify the OTF in this observation, but it was of great interest to check the tightness of the fistula and its link to adjacent organs [8]. It allowed us to eliminate the complications that can be associated with it (mediastinitis and aortic fistula) and guide therapy, while standard radiography was a help to the diagnostic orientation.

Therapeutically, OTF reports of surgical treatment although other authors opt for armed expectant monitoring for the small

uncomplicated fistulas which are less than 15 mm [9]. In another situation, the reference gesture consists of a closing of the tracheal and esophageal perforations reinforced with muscle flaps after obtaining a spontaneous ventilation, septic inspection, and proper nutritional status after a feeding gastrostomy [1]. The failure or the recurrence of this technique, as in our case, leads to indicate an esophageal bi-exclusion and colon interposition of a transplant.

Conclusion

Finally, the impossibility, for some people in the region of Madagascar to have access to a health facility known as "reference" explains the occurrence of such extraordinary situation. We insist to suggest the diagnosis of an OTF and to get rid of it at an association of respiratory and digestive symptoms of chronic course in order to avoid major surgery with a guarded prognosis.

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