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CASE REPORT / OLGU SUNUMU

A case of esophagorespiratory fistula found on videofluorography

Videoflorografide saptanan bir özofagorespiratuar fistül olgusu

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ABSTRACT

We report a 59-year-old woman who presented with recurrent episodes of coughing and choking while eating. She had a history of metastatic tumor in the mediastinal lymph nodes treated with radiation and chemotherapy. She had also undergone placement of an esophageal stent. Videofluorography demonstrated esophagorespiratory fistula between the trachea and esophagus. The prevalence of this complication increases with prolonged survival of patients with malignancy in the mediastinal region. Such fistulae should be diagnosed as early as possible, because insertion of a covered stent usually improves the quality of life for these patients.

Key words: Esophagorespiratory fistula, videofluorography, malignancy, esophageal stent.

ÖZET

Bu olgu bildirisinde, yemek sırasında tekrarlayan öksürme ve boğulma nöbetleri olan 59 yaşında bir kadın hasta sunulmuştur. Geçmişinde, mediastinal lenf bezlerinde metastatik tümör bulunması nedeniyle radyasyon ve kemoterapi tedavisi uygulanmış olup, ayrıca özofajiyal stent takılmıştır. Videofluorografide trake ve özofagus arasında özofagorespiratuar fistül olduğu görülmüştür. Bu komplikasyonun prevalansı, mediastinal bölgede malignitesi olan hastaların hayatta kalma sürelerinin uzaması ile artar. Kaplı stent takılması, bu hastaların yaşam kalitesini genelde artırdığından, bu tür fistüller mümkün olduğunca erken teşhis edilmelidir.

Anahtar kelimeler: Özofagorespiratuar fistül, videofluorografi, malignite, özofajiyal stent.

INTRODUCTION

Esophagorespiratory fistula is a serious complication of esophageal, tracheal and bronchial lesions including malignancy.[1] Patients with esophagorespiratory fistula are sometimes misdiagnosed as having aspiration and referred to the department of rehabilitation medicine. Although esophagorespiratory fistula has been well documented in the literature of surgery and internal medicine,[1-5] there have been few reports about this complication in the literature of rehabilitation medicine.[6,7] We therefore present a patient with esophagorespiratory fistula and discuss the clinical characteristics.

CASE REPORT

A 59-year-old woman was admitted to our hospital with an 8-day history of recurrent episodes of coughing and choking while eating. She had a history of breast cancer surgery 26 years before and metastasis to the mediastinal lymph nodes treated with radiation and chemotherapy 7 months prior to the current admission. The patient had also undergone esophageal stent placement for esophageal stenosis two months before. After admission, she had an episode of pneumonia treated with antibiotics. Because esophagorespiratory fistula was suspected, laryngeal, gastrointestinal and bronchial endoscopic examinations, barium esophagography and computed tomography (CT) of the neck and chest were performed. However, none of these modalities demonstrated esophagorespiratory fistula. Therefore, she was referred to our department to evaluate dysphagia. Findings on screening tests for dysphagia including repetitive saliva swallowing test (RSST)[8] and modified water swallowing test (MWST)[9] were

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unremarkable. Although food test (FT) using a bit of pudding did not initially exhibit any abnormal findings, on the third gulp, she suddenly coughed and choked. Videofluorography (VF) did not show any laryngeal intrusion, tracheal aspiration, or esophageal retention of contrast media. Thereafter, she began to cough and choke again. VF demonstrated reflux of contrast media from the trachea to larynx. Without a break, we observed the esophageal phase and found a collection of contrast media in the trachea and bilateral bronchi (Fig. 1), which had been regurgitated during her coughing. Fistula in and around tracheal bifurcation was suspected. A second esophageal stent was inserted. A week after, we confirmed the disappearance of esophagorespiratory fistula on barium esophagography. She could eat without any complaints until the metastatic tumor in the mediatinal lymphonodes and esophagorespiratory fistula recurred four months later.

Figure1. A 59-year-old woman with esophageal stent causing an esophago- respiratory fistula. Right posterior oblique view on esophageal phase of videoflorography showed the collection of contrast media in the bilateral bronchi (arrowheads). A black arrow denotes the esophageal stent.

DISCUSSION

Esophagorespiratory fistulae are classified as congenital or secondary. Because the congenital type is generally associated with esophageal atresia, it is usually diagnosed at birth.[10] Secondary esophagorespiratory fistula may be caused by trauma, infection, diverticula and malignancy in the esophagus and respiratory tracts.[1] Esophageal and tracheal stent placement may also induce secondary esophagorespiratory fistula.[4,5] The present case had a history of metastasis in the mediastinal lymph nodes, and a past history of radiation therapy in this area and had undergone esophageal stent placement. These factors are considered to damage esophageal and respiratory tissues and induce esophagorespiratory fistula.

Including our case, four cases of secondary esophagorespiratory fistula detected by VF have been reported.[6,7] All cases had a history of malignancy treated with radiation and chemotherapy. Esophageal stent had been inserted in two cases. All cases complained of coughing and choking after swallowing. Three cases had an episode of pneumonia. In all cases few abnormal findings were detected on screening tests for dysphagia. While VF did not demonstrate abnormal findings during the oral and pharyngeal phases either, it showed upward propulsion of contrast media from the trachea into the larynx, as contrast media entering the airway via a fistula precipitated a bout of coughing. It is important not to diagnose this finding as aspiration.

Recently, esophageal and tracheal stenting has been applied in the patients with malignant esophageal and tracheal stenosis. As the survival of these patients becomes prolonged, the prevalence of various delayed complications including esophagorespiratory fistula has been increasing. About 10% of these patients develop esophagorespiratory fistula.[3,4] This condition should be diagnosed earlier in patients with the above characteristics, because insertion of covered stents usually improves their quality of life.[1,2,4]

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