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A case of hypopharyngeal cancer with stenosis, perforation, and pyogenic spondylitis development after chemoradiotherapy



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ABSTRACT

INTRODUCTION: Chemoradiotherapy plays an important role in preserving function and morphology in head and neck cancer. However, in a few cases, chemoradiotherapy has been shown to result in late complications, such as hypopharyngeal perforation, which is very rare.

PRESENTATION OF CASE: A 65-year-old man, who had undergone chemoradiotherapy for hypopharyngeal cancer 30 months previously, presented with high fever and neck pain. He subsequently developed hypopharyngeal stenosis, hypopharyngeal perforation, and a retropharyngeal abscess followed by pyogenic spondylitis. He underwent surgical treatment (resection with reconstruction) and was administered an antibacterial agent and steroids for an extended period. This treatment regimen was successful, and the patient has survived disease-free without symptoms.

DISCUSSION: Chemoradiotherapy-induced hypopharyngeal perforation is an extremely rare condition. In the present case, the perforation was large (2 cm), and the hypopharyngeal cavity was originally constricted. Pharyngeal reconstruction with a jejunal autograft was therefore necessary. Through the present case, we reconfirmed that although the primary purpose of chemoradiotherapy is organ preservation, it can also lead to organ destruction and fatal complications. It is important that physicians be aware of the possibility of hypopharyngeal perforation so as to avoid delayed diagnosis and treatment of similar rare cases.

CONCLUSION: Hypopharyngeal perforation can sometimes be fatal because it can lead to pyogenic spondylitis. Suitable surgical techniques and appropriate doses of antibacterial agents for long-term use were appropriate treatments for the patient in this case.

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1. Introduction

Chemoradiotherapy (CRT), an established treatment for head and neck cancers, helps preserve head and neck function and morphology. However, CRT can cause various adverse effects. Hypopharyngeal perforation, although rare, is one such example. Here, we report an extremely rare case of hypopharyngeal perforation after CRT along with a review of the literature.

2. Presentation of case

The work has been reported in line with the CARE criteria [1].

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A 65-year-old man presented at our hospital in July 2014 with aphagia, neck pain, and fever. He had been previously diagnosed with hypopharyngeal cancer (posterior wall, T2N0M0; Fig. 1) in November 2011 at a different hospital, for which he had received CRT (66 Gy, $2 \text{ Gy} \times 33$ fractions; cisplatin, 120 mg/body). In May 2014, he was referred to another hospital because of swallowing difficulty, where he was diagnosed with recurrent hypopharyngeal cancer, deemed inoperable. Palliative treatment was selected, and the patient underwent percutaneous endoscopic gastrostomy. Subsequently, he developed neck pain and fever (38 °C) that persisted for >1 month. In July 2014, he was referred to our department.

2.1. physical examination

Subjective symptoms at admission consisted of 38 °C fever persisting for 1 month, neck pain, inability to retroflex the neck, and hypoesthesia of the fingers. Computed tomography demonstrated low-density areas with air in the retropharyngeal and pre-vertebral spaces of cervical vertebrae [3–5]. Suspected fistula formation with the hypopharynx was also observed (Fig. 2a, b). Magnetic resonance

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Abbreviations: CRT, chemoradiotherapy; PEG, percutaneous endoscopic gastrostomy; MRI, magnetic resonance imaging.

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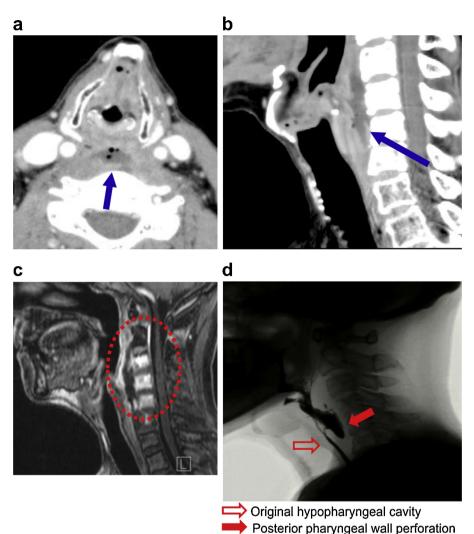


Fig. 2. ((a) and (b)) Computed tomography, (c) magnetic resonance imaging, and (d) transillumination findings.

imaging (MRI) revealed the disappearance of the pre-vertebral muscles in the same site and pyogenic spondylitis (Fig. 2c). On videofluorography, the contrast medium flowed into the retropharyngeal space from an approximately 2-cm perfusion site in the posterior pharyngeal wall and accumulated in the cecum; in addition, the hypopharyngeal cavity was observed to have originally been narrow (Fig. 2d).

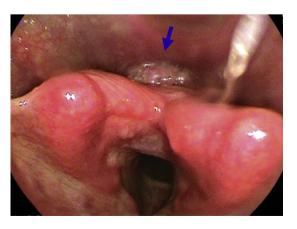


Fig. 1. Fiberscopy findings on initial examination for hypopharyngeal cancer at another hospital.

2.2. Treatments

Hypopharyngeal stenosis and perforation due to CRT or recurrent cancer was considered to have resulted in a retropharyngeal abscess, which subsequently led to pyogenic spondylitis. The patient received an antibacterial agent (cefepime, 2g/day) and steroids (prednisolone, tapered from 60 mg), after which he underwent observation with a curved laryngoscope. Expansion of the hypopharynx revealed a large perforation in the posterior hypopharyngeal wall and pervasion of the necrotized pre-vertebral muscles in the base of the perfusion site and the vertebra itself (Fig. 3a). The left half of the pyriform sinus showed adhesions. Histopathological analysis of the tissues from the blind biopsy of the mucosa surrounding the perforation as well as of the necrotic tissue revealed inflammatory granulation.

At 3 weeks post-admission, the patient was scheduled for total pharyngo-laryngo-esophagectomy, neck dissection, necrotized pre-vertebral muscle debridement, pharyngeal reconstruction with a free jejunal autograft, and coverage of the anterior aspect of the vertebra with a pectoralis major muscle flap. During surgery, the following were observed: advanced adhesion between the hypopharynx and the surrounding tissue; complete pre-vertebral muscle necrosis at the third and fourth cervical vertebrae; and pervasion of infected granulation tissue in the anterior aspect of the vertebrae. When the unhealthy granulation was completely Download English Version:

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