INTRODUCTION

Necrotizing fasciitis (NF) is an unusual, rapidly advancing life threatening infection with fascial and subcutaneous tissue necrosis and gangrene of the skin. It mostly affects the extremities, abdominal wall and perineum whereas cervical NF is rare. NF of head and neck is often caused by both aerobic and anaerobic microorganisms found in upper aerodigestive tract. Usually cervical NF originates from odontogenic, tonsillar and pharyngeal infection, whereas it is rarely a complication of surgical procedure. Without immediate surgical treatment cervical NF leads to mediastinitis and fatal sepsis (1). There is only one reported case in world literature of cervical NF following total laryngectomy (2). We report two cases of cervical NF with thoracic extension following total laryngectomy, selective neck dissection and primary voice prosthesis insertion. In one of them NF was associated with Lemierre’s syndrome: thrombosis of internal jugular vein.

TWO CASE REPORTS

A 51-year-old patient and 70-year-old patient with squamous cell carcinoma of the vocal cords (T3 N0 M0) underwent total laryngectomy and selective neck dissection. In the same act tracheoesophageal puncture for the voice prosthesis was performed and feeding tube was inserted through it. On fifth and sixth postoperative day both patients developed erythema and swelling of the neck with purulent discharge (Fig. 1). Patients were nontoxic and laboratory reports showed elevated WBC count and C-reactive protein (CRP). Immediate exploration of the neck revealed necrosis of subcutaneous fat and fascia, wide pharyngeal fistula and in younger patient thrombosis of right internal jugular vein, Lemierre’s syndrome (Fig. 2).

All necrotic area was excised until healthy bleeding tissue was encountered and in a patient with Lemierre’s syndrome internal jugular vein was resected. Nasogastric feeding tube and voice prosthesis were inserted. In the next two days the infection extended to the thoracic region. The wound was kept opened and irrigated with hydrogen peroxide several times a day. This regime, including debridment, was continued for next 4 days and in another patient for the next 7 days, until further tissue necrosis stopped. Biopsies were taken and frozen-section analysis showed superficial fascia necrosis, subcutaneous fat necrosis and vasculitis, with granulocyte infiltration and bacterial invasion (Fig. 3).

Broad-spectrum antibiotics, amoxicillin /clavulanate, gentamicin and metronidazole, were administered immediately. In one patient sensitivity report revealed a high susceptibility of the Streptococcus spp., Streptococcus group D, B- hemolytic Streptococcus group C, Streptococcus viridans, Enterococcus faecalis and Enterobacter cloacae to these antibiotics. In second patient cultures showed Pseudomonas aeruginosa, Enterobacter spp., Streptococcus spp., Streptococcus group D and Acinetobacter spp also sensitive to these antibiotics. However, this patient had no CRP change after 7 days of treatment and imipenem was administrated.

On a fifth and eighth day, respectfully, growth of the fresh viable tissue was observed (Fig 4). Patients recovered well and after two weeks closing of pharyngocutaneous fistula was performed (Fig. 5).

CONCLUSION

These cases raise the awareness of this serious and rare postoperative complication. We highlight the importance of rapid diagnosis and early extensive surgical debridment because infection can spread within hours and reported mortality rate is up to 76% without early intervention.

References: