Austin Journal of Otolaryngology

Open Access

Austin Publishing Group

Case Report

Necrotizing Fasciitis of the Neck due to a Peritonsillar Abscess

Issing PR*, Laur M, Bezas V and Köhler T
Department of Otorhinolaryngology, Head-Neck and Facial Plastic Surgery, Klinikum Bad Hersfeld, Germany

***Corresponding author:** Issing PR, Department of Otorhinolaryngology, Head-Neck and Facial Plastic Surgery, Klinikum Bad Hersfeld, Germany

Received: July 20, 2020; **Accepted:** August 20, 2020; **Published:** August 27, 2020

Abstract

Necrotizing Fasciitis of the Neck (NFN) is a rare but life threatening inflammation which must be rapidly diagnosed and consequently treated by surgical and medical means. We report on an otherwise healty 62-year old male patient who developed NFN due to a peritonsillar abscess. After a tonsillectomy à chaud there was an initial improvement of the patient´s condition. However, a painful swelling of the right neck and a rapidly expanding erythema to the chest indicated a phlegmonous process affording instant surgical intervention. Under i.v. administration of tazobactam and daily irrigation of the drained wounds the patients developed well and could be discharged after 12 days of hospital stay.

Keywords: Necrotizing fasciitis; Head and Neck region; Peritonsillar Abscess

Introduction

Necrotizing fasciitis of the neck is a rare condition which spreads rapidly along the fascial planes causing extensive necrosis. The term was coined by Wilson in 1952 [1]. However, Jones already described similar phlegmonous processes especially in wounded extremities during the Civil War in 1871 (cited by 2). In the head and neck region etiology mostly is odontogenic or by a pharyngeal inflammation such as a peritonsillar abscess [3-6]. Clinical features are an acutely developing swelling and erythema of the neck and a rapidly deterioration of the general condition which can result in a septicemia. Microbiological analysis usually reveals a mixed flora of anaerobes such as Prevotella and Staphylococcus aureus as well as the originally described ß-hemolytic group A Streptococci [2]. Descending spread and mediastinitis are dreaded sequela of a NFN which is commonly observed in immunocompromised individuals. However, this risk factor is not mandatory as our case report demonstrates.

Case Report

The 62-year old male patient developed a sore throat during a period of about 4 days with increasing pain on the right side with otalgia. After an initial treatment with oral penicillin he was referred to our hospital with increasing pain and trismus on the 25th of May 2020. Otherwise he was healthy. During the clinical examination a swelling of the right tonsillar region was observed with a clear airway without compromise of the larynx. The CT-scan revealed a hypodense swelling behind a hyperdense structure (tonsillolith) of the right oropharyngeal region (Figure 1). The opening of the mouth was significantly reduced. Laboratory findings are shown in table 1. The diagnosis of a peritonsillar abscess was established and a tonsillectomy à chaud indicated. During surgery in the afternoon an abscess beside the right tonsil was found and the tonsil with the tonsillolith was removed. On the next day the pain in the throat was reduced and mouth opening was improved. However, an erythema and diffuse swelling of the tender neck which was extremely painful on palpation developed during few hours expanding to the chest (Figure2 and 3). Ultrasound revealed an inhomogenic, hypoechoic

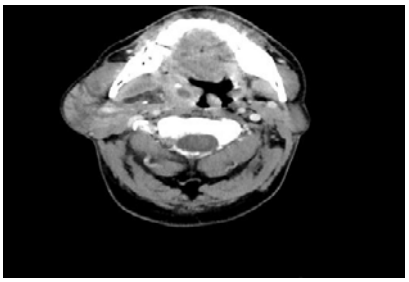

Figure 1: CT-Scan with a hyperdense structure of the right tonsil (tonsillolith) in front of a hypodense, oval shaped swelling suggesting a peritonsillar abscess.

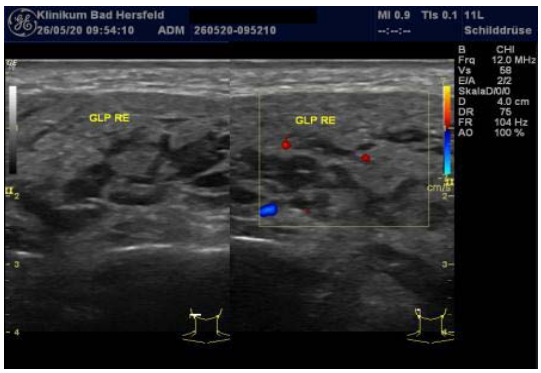

Figure 2: Sonography on day two demonstrating a diffuse swelling of the right parotid gland (GLP) which could be followed to the right neck.

swelling of the parotid gland with extension to the right neck (Figure 4). We supposed a cervical necrotizing fasciitis and decided to surgically explore the neck. After skin incision a putrid, foetid fluid appeared and superficial necrosis of the underlying muscles could be proven (Figure 5). Similar to the procedure of a neck dissection skin flaps were elevated by a modified McFee approach and several drains were placed subcutaneously (Figure 6). The wounds were irrigated

Citation: Issing PR, Laur M, Bezas V and Köhler T. Necrotizing Fasciitis of the Neck due to a Peritonsillar Abscess. Austin J Otolaryngol. 2020; 7(1): 1112.

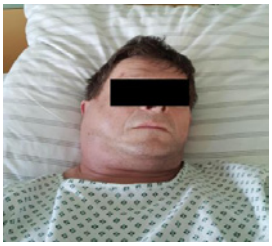

Figure 3: Patient in the morning of day two with a significant, diffuse, painful swelling of the right face.

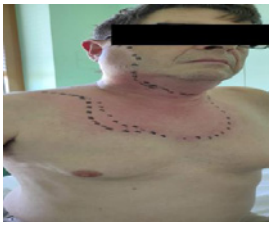

Figure 4: Fast spreading of the erythema from the neck to the chest on the early afternoon of day two.

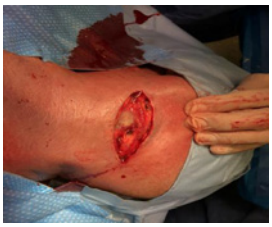

Figure 5: Intraoperative finding with foetid fluid after skin incision during surgery in the late afternoon of day.

with iodine and saline fluid twice a day accompanied by an i.v. treat of sulbactam. In the microbiological swab of the peritonsillar abscess Streptococcus gordonii could be isolated. In the fluid of the neck no bacteria grew probably due to antibiotic treatment. Histology of neck tissue demonstrated a mostly neutrophil infiltration with extensive necrosis. The patient´s general and local condition continuously improved over the period of ten days as well as the laboratory findings.

Discussion

NFN is a rare and potentially fatal disease which can cause a spreading inflammation of the neck and mediastinum [2,3]. The

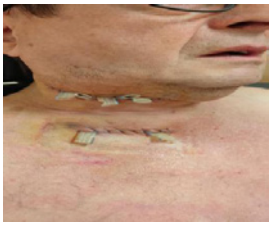

Figure 6: Situation one week after neck revision with normal colour of the cervical skin without swelling and drains *in situ* which were removed gradually later.

focus can be a process of the tonsils or a periapicitis of avital teeth with a combination of aerobic and anaerobic bacteria. The spread of the disease can be overwhelming which makes an early diagnosis and consequent treatment mandatory as our case demonstrates even if the patient was otherwise healthy [5]. Immunodeficiency such as diabetes, HIV, immunosuppressive treatment etc. can be a predisposing factor, however, this is not always the case. Important seems to be to think about the possibility of a NFN at all and immediately start the treatment with a consequent surgical approach to the focus and to open the neck planes in combination with an appropriate antibiotic treatment. The possible effect of an adjunctive hyperbaric oxygen therapy remains unclear [7].

1

1. Wilson B. Necrotizing Fasciitis. The American Surgeon. 1952; 18: 416-43.
2. Toro PC, Castillo ÀC, Saltó JT, Compta GX, Farré A. Cervical Necrotizing Fasciitis: Report of 6 Cases and Review of the Literature. European Annals of Otorhinolaryngology, Head and Neck diseases. 2014; 131: 357-9.
3. Bloching M, Gudziol S, Gajda M. Berghaus A Diagnosis and Treatment of craniocervical Necrotizing Fasciitis. Laryngo-Rhino-Otol. 2000; 79: 774-9.
4. Wong RY, Huang JX, Chug CH. Cervical Necrotizing Fasciitis of Odontogenic Origin: A Report of 11 Cases. J Oral Maxillofacial Surg. 2000; 9: 829-834.
5. Al-Ali MA, Hefny AF, Idris KM, Abu-Zidan FM. Cervical Necrotizing Fasciitis: An Overlooked Diagnosis of a Fatal Disease. Acta Oto-Laryngologica. 2018; 138: 411-4.
6. Abdurrazq TO, Ibikunle AA, Braimah RO. Cervical Necrotizing Fasciitis: A Potentially Fatal Disease with Varied Etiology. Ann Med Health Cis Res. 2016; 6: 251-6.
7. Flanagan CE, Daramola OO, Maisel RH. Surgical Debridement and adjunctive Hyperbaric Oxygen in Cervical Necrotizing Fasciitis. Otolaryngol Head Neck Surg. 2009; 140: 730-4.