A 57-year-old female patient came to the emergency department of Dr. Hasan Sadikin General Hospital, complained with swelling at lower jaw, redness with necrotic skin at neck and swelling at chest region. About 1 month prior to admission, the patient complained of toothache at right lower jaw. About 3 weeks prior to admission, the swelling occurred at right lower jaw and about 2 weeks prior to admission, the patient complained the swelling at right lower tooth. About 3 days prior to admission, the swelling got bigger accompanied with difficulty in swallowing and there was spontaneous drainage from right lower tooth. About 3 hours prior to admission, the patient brought to Hasan Sadikin Hospital Emergency Department for further treatment.

Physical examination, the patient had high blood pressure, tachycardia, febrile temperature, and tachypnea, the lesion appeared reddish, febrile temperature and there was necrotic lesion (Figure 1). Intravenous was found that the patient had poor oral hygiene and there were multiple radii.

Figure 1. Extrinsic appearance there was swelling at lower jaw, swallowing and reddish at chin region.

Introduction

Necrotizing Fascitis (NF) is a potentially fatal soft tissue infection, characterized by extensive NF tissue necrosis in the subcutaneous tissue, fascia and deep muscles which usually occurs as a complication of odontogenic infections, is characterized by polymicrobial aerobic and anaerobic NF organisms indigenous to the oral cavity. The mortality rate of describing necrotizing mastitis was originally as high as 50%.

Early diagnosis combined with emergency extensive surgical debridement, removal of all affected soft tissues, appropriate broad-spectrum empiric antibiotic treatment and a multidisciplinary team approach are essential for successful treatment of necrotizing fasciitis. Broad-spectrum empiric bacterial intravenous (IV) antibiotics are generally always indicated in these cases because all involved tissues cannot be completely eradicated until specific culture and sensitivity results are available to guide specific antibiotic regimen. The extensive tissue necrosis, including the skin, must be debrided thoroughly to halt the continued spread of the disease process. Removal of the offending source of the infection, aggressive surgical debridement, the use of initial broad-spectrum empiric antibiotics, and medical optimization of the patient are of paramount importance.

Case Report

We reported a 57-year-old female patient with swelling at chin region that present and there was necrotic tissue at chin area. She was diagnosed with necrotizing fasciitis at submental region and from dental examination, we found multiple radii that thought to be origin of the infection. The treatment involve broad-spectrum antimicrobial therapy, muscle and drainage, extensive necrotic tissue debridement. After surgical debridement, the wounds are packed with moist dressing and there was rapid healing. Early diagnosis combined with emergency extensive surgical debridement, removal of all affected soft tissues, appropriate broad-spectrum empiric antibiotic treatment and a multidisciplinary team approach are essential for successful treatment of necrotizing fasciitis.

Conclusion

Necrotizing fasciitis management requires adequate measures according to clinical guidelines for the management of odontogenic infections to prevent the spread of infection by considering systemic conditions.

Keywords: Necrotizing fasciitis, modern dressing

Mild hydration to correct the electrolytes level

Treatment

Mild hydration to correct the electrolytes level

Figure 2. Intraoral, poor oral hygiene; mouth opening about 2.5 cm

Figure 3. Neck soft tissue radiography

Diagnosis

Necrotizing fasciitis denotes submucosal abscess due to gangue one pulp of teeth 47 with Chronic apically periodontitis of teeth 15,21,27,36,37. Widened periodontal ligament is suspected. Treatment

Mild hydration to correct the electrolytes level

Figure 4. Post necrotomy debridement and extraction

Figure 5. a. Post-operative day 1; b. Post-operative day 3; c. Post-operative day 6; d. Post-operative day 9

Discussion

Necrotizing fasciitis is a rare, life-threatening complication from odontogenic and/or oropharyngeal NF infection, is often fatal, but in life-threatening. Initial diagnosis can be made by history and physical examination but is often difficult. Plain radiographs of the neck and chest can demonstrate subcutaneous emphysema, widened mediastinum, and pleural effusion.

Four factors that contribute significantly to morbidity and mortality Necrotizing Fasciitis of odontogenic origin are: (1) Delayed treatment due to difficulty in recognizing the condition; (2) Inappropriate treatment; (3) Host-determination; (4) The presence of polymicrobial infection.

High dose of intravenous antibiotics should be started empirically. Immediate broad-spectrum antibiotic whichever can be modified once culture results are obtained and surgical debridement of the lesion is usually a life-saving procedure. All necrotic tissue must be removed, after the surgical debridement, wounds are packed with moist dressing which is changed frequently.

The modern wound dressing material to this case is hydrocolloid gel, and polyethylene-laminate bismarke. The exudate margins were removed during each occasion for the wound dressing. The wound bed was kept moist to allow for easier epidermal migration and re-epithelialisation.

Conclusion

Necrotizing fasciitis is a severe, life-threatening complication that can occur from odontogenic NF infection. Early diagnosis of Necrotizing Mastitis can be decreased with clinical awareness, early diagnosis, empirical antibiotic treatment adequate, urgent surgical debridement followed by intensive supportive care and modern wound recording.

References