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Ludwig's Angina – a Case Report

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ABSTRACT: Ludwig's angina is a serious, often fatal infectious disease process that requires prompt diagnosisand intervention with life-saving therapies. Caring for a patient with Ludwig's angina involves ability to recognize subtle changes in the patient's status and intervene quickly to prevent airway edema or profound sepsis.In the present article typical case of Ludwig's angina is presented, followed by a review of clinical findings and therapeutic modalities.

KEYWORDS: Ludwigs angina, airway, edema, sepsis

I. INTRODUCTION

Ludwig's angina and deep neck infections are potentially lethal entities because of their tendency to cause edema, distortion, and obstruction of the airway . In the early stages of the disease, patients may be managed with observation and intravenous antibiotics. Advanced infections, however, require the airway to be secured and surgical drainage. This is complicated by pain, trismus, airway edema, and tongue displacement creating a compromised airway. The present article highlights on a recent case of ludwigs angina reported to the department ,its clinical diagnosis ,management along with discussion.

II. CASE REPORT

A 45-year-old woman patient reported to the outpatient department of C.S.M.S.S dental college ,withthe chief complaint of painful neck sewlling and difficulty in swallowing for 3 days,. she reported progressive swelling in the neck and inability to open the mouth. . she gaveno history of difficulty in breathing at rest. She had difficulty in swallowing and decreased intake for more than 8 hours. On physical examination, she had no respiratory distress, but was uncomfortable because of pain and swelling . She was febrile (38.8°C) with a pulse rate of 106 beats per minute, blood pressure of 140/90 mmHg and a respiratory rate of 25 breaths per minute. She had impaired speech. Extraoral examination revealed restrictedmouth-opening with an inter incisor gap of 1 cm,.incompetant lips showing typical open mouth appearance. There was a diffuse tender neck swelling on left side of above the level of hyoid bone particularly in the sub-mandibular,submental and sublingual space,crossing the midline . Neck extension was painful and limited. Both the nares were patent and the trachea was palpable in the lower part of neck (Figure 1).skin over the swelling is tense and edematous in appearance .Intraoral examination revealed lifting of floor of mouth of left side ,tongue was elevated ,protruded and restricted movements of tongue(figure2).Further hard tissue intraoral examination revealed cariously fractured 46,47 teeth and root piece of 27.An OPG was taken which showed irregular radiolucency on distal aspect of crown of 46 and mesial aspect of crown of 47 approaching to pulp and rarefaction of periapical bone with 46 (figure3). .A provisional diagnosis made based on clinical findings was Ludwig's angina and patient was scheduled for emergency drainage of the abscess.Incision and drainage were performed by the submandibular route and a drain left behind (figure 4),patient was givenemparical antibiotic therapy and kept inobsevation . Culture of the drained pus revealed growth of Streptococcus

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species .Patient recovered with the treatment and was discharged after 5 days.

Figure 1: patient reported to the department

Figure2: Intraoral examination

Figure 4: Right submandibular ,submental and left submandibular drains

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Figure 3: Panromic radiographic examination showing cariously fractured 46,47,periapical bone rarefraction

Figure 5:showing postoperative recovery of patient

III. DISCUSSION

Ludwig's angina was first described by Wilhelm fredreich von Ludwig in 1836.The word "angina" comes from the greek word ankhon,meaning"strangling", so in this case ,Ludwig's angina refers to the feeling of strangling . Ludwig's angina is severe cellulitis, beginning usually in the submandibular space and secondarily involving the sublingual and submandibular spaces as well.

It typically originates from an infected or recently extracted tooth, most commonly the lower second and third molars . The sub-mandibular space is involved by penetration of the thin inner cortex of the mandible by periapical dental abscesses. It has, however, been reported as a result of mandibular fracture, submandibular sialadenitis, peritonsillar abscess, epiglottitis , and oral malignancies . Ludwig's angina begins as a mild infection and can rapidly progress to brawny bilateral induration of the upper neck with pain, trismus, and tongue elevation. Fever and dysphagia are common. The most serious complication of Ludwig's angina is asphyxia caused by expanding

edema of soft tissues of the neck. Another common cause of death is the acute loss of airway during interventions to control the condition . Stridor, difficulty managing secretions, anxiety, cyanosis, and sitting posture are late signs of impending airway obstruction and indicate the need for an immediate artificial airway[2]

Ludwig's angina was formerly invariably fatal but now, with adequate surgical and antibiotic treatment, has a much reduced rate of mortality . It remains, however, a potentially life-threatening condition because of the risk of impending airway obstruction . Thus,promptrecognition and treatment remains cornerstone of management of Ludwig's angina. Treatment involves airway protection, surgical intervention or drainage, appropriate antibiotics,treatment of the cause and supportive medical treatment. With appropriate medical and surgical treatment the mortality of ludwig's angina has declined significantly declined in the current era.

IV.CONCLUSION

Ludwig's angina, although uncommon, is still seen in emergency practice. The oral physician must be able to rapidly recognize this condition. Airway protection, antibiotics, and surgical drainage are the mainstays of therapy, and their appropriate use will assure the best possible outcome. Every odontogenic infection encountered in the emergency department should be viewed as a potentially fatal case of Ludwig's angina. In advanced cases, however, securing the airway and surgical drainage are important decrease the incidence of this already rare condition.

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