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A LETHAL CASE OF LUDWIG'S ANGINA

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Background: *Life-threatening odontogenic infections are very rare. However, untreated periapical infections especially in the lower molar regions may spread to the submandibular space and via parapharyngeal spatia to adjacent structures. The condition may progress very rapidly. The cellulitis is called Ludwig's angina and may have lethal consequences mainly due to airway obstruction. Case history: A 25 year old male addressed a private dental practice for emergency treatment on a Saturday outside opening hours. According to the dental record he presented with fewer, moderate extraoral swelling, several carious lesions and heavy pain from a major lesion in 37. The dentist prescribed antibiotics and instructed the patient to seek hospital emergency treatment if signs of dysphagia or compromised airways developed over the weekend. An appointment with the regular dentist should be arranged the following week. It was stressed that the patient should not be let alone. The situation seemed to improve the following days where the pain abated. However, on Tuesday the patient was let alone at 07.00 and at 12.30 he was found unconscious. The head and upper truncus was bluish, the submandibular region and tongue were characterized by heavy swellings.*

Resuscitation was unsuccessful.

Methods / Results: *Autopsy including forensic dental examination revealed extensive extra- and intraoral swellings and visible accumulations of pus in the oral cavity. Clinical and radiographic dental examination showed several major carious lesions in maxillary and mandibular teeth. A slight widening of the apical periodontal membrane was seen in 26 and 37 but no major radiolucent areas could be observed. By thorough clinical examination an approximately 1 cm² area characterized by several microscopic perforations of the cortical bone was found at the lingual aspect of the mandibular base adjacent to the apices of 37. Spread of infection with major accumulations of pus in relation to mediastinal structures, lungs and anterior aspect of the vertebral column were found. Microbiological analyses showed that the microflora was dominated by streptococci and staphylococci. It was concluded that airway obstruction due to sepsis with swellings of the floor of the mouth and infection spread into neighboring areas was the cause of death. The case emphasizes that patients with general symptoms as fewer and swellings of the floor of the mouth and neck should be very carefully followed. Signs of airway obstruction is a serious warning of infection spread. Ludwig's angina may furthermore be characterized by significant edema causing trismus and inability to swallow saliva.*

Conclusion: Dentists and general doctors must be aware of even subtle signs which occasionally may develop into a life-threatening situation where referral to hospital for intravenous administration of antibiotics and in severe cases tracheostomy is the only way to secure airway control. Further, this severe case should remind forensic pathologists and forensic odontologists about the possibility of a dental origin for general infections also in less obvious cases where the indications of a dental involvement are more subtle.

KEYWORDS: Forensic Odontology, Ludwig's Angina, Lethal.

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