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CASE REPORT

DENTOALVOLAR ABSCESS WITH EXTRA ORAL SINUS IN A PEDIATRIC PATIENT: A CASE REPORT

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ABSTRACT:

Cutaneous sinus tract of dental origin are often misdiagnosed and inappropriately treated because of their uncommon occurrence and absence of symptoms in about half of the patients. A case report describing the diagnosis and treatment of an extra oral cutaneous sinus tract of odontogenic origin in relation to mandibular left first molar with surgical treatment and proper antibiotic coverage is presented.

Key words: dentoalvolar abscess, sinus tract, periapical region

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INTRODUCTION:

In the paediatric patient, dental abscesses are not uncommon. Even though the decline in dental caries in past decades, many young children are still at risk for dental decay, and pulpal infections from caries in primary teeth have been reported [1]. In addition, dental abscesses resulting from trauma are also encountered in young children. In most

children, these infections usually present as chronic inflammation, which are localized to the offending tooth. In such cases, management of localized pulpal infections in the primary dentition includes root canal treatment or extraction and space maintenance [1]. On the other hand, the treatment of a spreading, acute dental abscess centres on pain control, antibiotics, surgical drainage and removal of

the source of infection, which may include endodontic treatment or extraction of the tooth. Sinus tract is defined as the channel leading from the enclosed area of the inflammation on the epithelial surface. Opening of sinus tract may be located either intraorally or extra orally [2]. Cutaneous sinus tract of dental origin is uncommon. Even though they have been well documented in medical and dental literature the lesions continue to be misdiagnosed challenging and stance a diagnostic dilemma [2, 3]. Studies indicate that extra oral sinus tract is most commonly found in cheek, chin and angle of the mandible [4]. Most commonly the ethology of odontogenic sinus tract involves chronic periradicular abscess that arises from bacterial invasion and chemical irritation or trauma [5]. Here we report a case of dentoalvolar abscess with extra oral sinus of an 11 year old female patient.

CASE REPORT:

An 11 year old female patient reported to the dental hospital with a complaint of ulcerative area on the left region of the lower jaw since one week. The ulcer was painful and associated with purulent discharge since 2 days, fever since 3 days with sleep disturbance. She was given medication for the pain and fever. On presentation, extra oral inspection showed diffused ulceration below the border of the mandible measuring 2 × 2 cm in diameter, extended anteriorly 3 cm short of

the chin and posteriorly 4 cm short from angle of the mandible. The colour of the lesion was brown and borders appear to be rough with erythematous surrounding skin pus discharge seen from the ulcer; no other ulcerated area was seen elsewhere on the face (Fig. 1). On palpation the lesion was tender and not fixed to the underline structures, paraesthesia was also not present. Intra oral inspections showed grossly decayed 36 with obliteration of buccal vestibule (Fig. 2). Based on the history and clinical examination a provisional diagnosis of dentoalvolar abscess with extra oral sinus was made. Intra oral radiograph (Fig. 3) showed coronal radiolucency involving enamel and dentin and approaching pulp periapically diffused radiolucency with ill-defined borders. Based on the radiographic findings a final diagnosis of dentoalvolar abscess with extra oral sinus was made.

The treatment plan was incisional and drainage of extra-oral sinus with extraction of 36. The treatment done was prescribed. Initial management included, antibiotic coverage, Amoxicillin paediatric 250 mg thrice daily (TID) Flagyl 200mg TID and Ibugesic paediatric TID on the first visit. After the infecting subsided, the extraction of 36 (Fig4) was done with debridement of extra oral sinus with suturing. The patient was recalled after a week for suture removal with application of betadine ointment and Neosporin powder. On the fourth visit the lesion site showed complete healing.



Figure 1: Pre operative view of draining sinus



Figure 2: Grossly decayed 36 with buccal vestibular obliteration

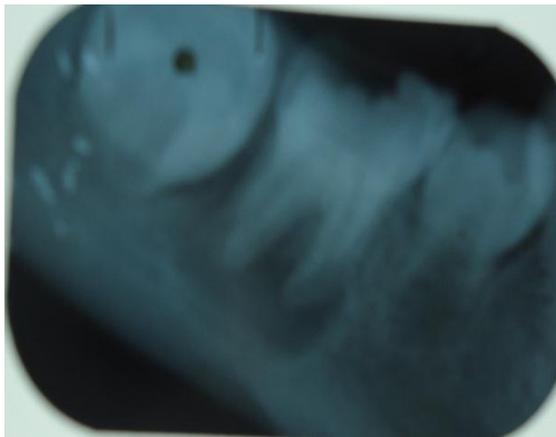


Figure 3; Radiograph of 36 with periapical radiolucency



Figure 4: Extracted 36

DISCUSSION:

Chronic dentoalvolar abscess is long standing of low grade infection of periradicular tissue result from acute pulpitis or acute non-suppurative periodontitis or acute exacerbation of periapical granuloma, cyst or abscess [5]. A

dentoalvolar abscess may be initiated by caries, periodontal disease, trauma, or thermal and chemical injuries. An intra-oral or extra-oral sinus can develop, depending on the path of the inflammation, which is dictated by surrounding muscular attachment and facial

planes [6, 7]. The site of dental sinuses is usually anatomically close to the causative tooth. Occasionally, the opening of the sinus tract may be found at a far distance from the dental infection, which makes the diagnosis challenging, especially with respect to intact teeth. It is usually a non-vital tooth, but in edentulous patients, it could be a retained tooth fragment, an impacted tooth, or an odontogenic cyst. On the basis of clinical appearance the differential diagnosis includes pustules, actinomycosis, osteomyelitis, pyogenic granulomas, furuncles neoplasms; squamous cell carcinomas, epidermal cyst [8, 9].

In this present case the apparent cause of sinus formation was the pulp necrosis of 36, which was grossly decayed with complete loss of crown structure except the lingual wall. The major management guidelines for the treatment of a sinus include draining the pus and removing the source of infection. Antibiotics may be used as an adjunct to conventional treatment; when a drainage cannot be established immediately, if the pus has spread to the superficial soft tissues or when the patient is in the setting of diabetes, immunosuppression, or systemic signs of infections such as fever. Antibiotic therapy alone may not be effective in these cases, because of the absence of adequate circulation in a necrotic pulp system and abscess. If antibiotics are to be used, penicillin V potassium is the first choice. Clindamycin or amoxicillin-clavulanate may be used if the

infection is unresponsive [10]. In penicillin hypertensive patient's erythromycin and metronidazole can be given, as most of the infections are caused by obligate aerobes. Recognition of the true nature of the lesion facilitate as the quick treatment, it minimize the patient discomfort and aesthetic problems and reduce the possibilities of developing further complications prominently.

CONCLUSION:

The eradication of the dental source of infection invariably terminates suppuration, establishment of healing and resolution of the cutaneous lesion. Communication between the dentist and the physician is suggested to provide timely acknowledgement and treatment of rare cases.

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