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RESEARCH ARTICLE

STERILE ABSCESS, A RARE COMPLICATION OF INTRALESIONAL STEROID IN ORAL SUBMUCOUS FIBROSIS - CASE REPORT

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ABSTRACT

Oral submucous fibrosis (OSMF) is most commonly found pre-cancerous conditions prevalent in Southeast Asian countries like India. The treatment varies from conservative to surgical depending on the stage of the disease. Significant improvement was noticed in most patients, if treated byintralesional steroids. Here, we are presenting a rare complication of sterile abscess formation after 3 weeks of intralesional corticosteroid injection for the management of grade II oral submucous fibrosis (OSMF) which is very rarely reported in the literature. He was put off steroidal treatment and treated conservatively to which he responded positively.

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INTRODUCTION

Oral submucous fibrosis (OSMF) is a chronic disease with insidious onset, affecting oral cavity, pharynx, larynx and upper part of digestive tract (Pindborg *et al.,* 1984). Schwartz in 1952 was the first to identify it as a precancerous condition. It is most commonly seen in South-east Asian countries like India where its prevalence rate varies from 2 to 5 per 1000 (Dhingra, 2004). Literature suggests many etiological factors like excessive consumption of spicy food, nutritional deficiencies like chronic iron and vitamin B complex deficiency, areca nut or betal nut chewing habit, genetic predispositions. Clinically identified by burning sensation in oral mucosa exacerbated by spicy or acidic foods, pain often referred to temporal region, increased or decreased salivation, trismus, dysphonia, dysphagia, vesiculation or ulceration of oral mucosa (Rajendran, 1994). Various treatment modalities like physical therapy, high dose antioxidants, intralesional injections with steroids combined with/without hyaluronidase and placental extract and a myriad of surgical interventions are available, all of which have shown limited efficacy. Intralesional steroids still remains a first choice conservative approach for early grade I /II OSMF cases which improves burning sensation rarely causing any complications. Here, we are highlighting a rare case of abscess formation after 3 weeks ofintralesional steroid therapy in a 25 years old male patient suffering from grade II oral submucous fibrosis.

CASE REPORT

A 25-year-old male patient reported to our private dental clinic complaining of pain and swelling in the left cheek region since two weeks (Figure1). The pain was dull, aching and continuous in nature causing difficulty in chewing. His past dental history revealed that he had reduced mouth opening along with burning sensation in oral cavity while eating hot and spicy food since last eight months with a habit of chewing betal nut for past 5 years. He had consulted before for the same complaint and was diagnosed with oral submucous fibrosis grade II. He was advised intralesional steroid injections (Betamethasone 4mg/ml) which were given twice weekly for 4 weeks on the bilateral buccal mucosa. Following which, he noticed localized swellingover left cheek region after 3th week of therapy. Extraoral examination revealed a localized swelling on the left cheek region measuring 2X2 cm in dimension (Figure 1,2). The swelling was well defined, soft, fluctuant and compressible, associated with tenderness on palpation. Mouth opening was reduced with interincisal distance measuring 15 mmsuggestive of periapical abcess. Intraoral examination exhibited blanching of bilateral buccal mucosa (Figure 3) andretromolar area. Fibrous bands on the bilateral buccal mucosa and in the circumoral region were palpable. Movements of the tongue were restricted. Hard tissue examination exhibited full complement of teeth in the maxillary and mandibular arch.

Figure 1. Extra oral frontal view

Figure 2. Extra oral front lateral view

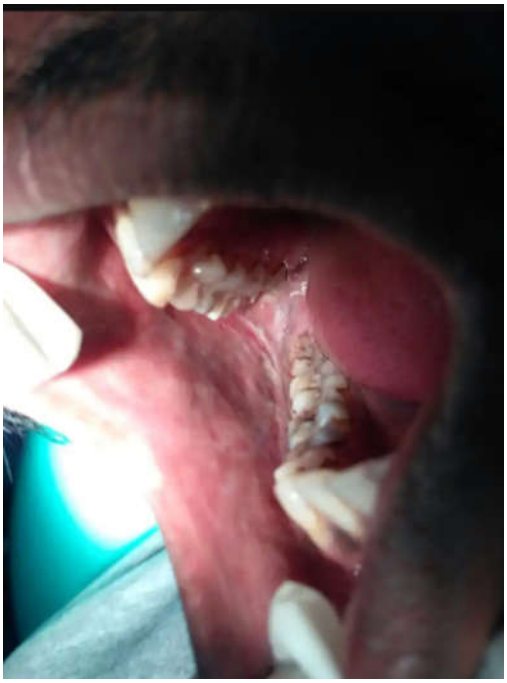

Figure 3. Intraoral view showing Blanching of buccal mucosa

Routine radiographic examination by taking orthopantomogram and vitality test of all the teeth ruled out any odontogenic cause for the swelling. Correlating history, clinical and radiographic examination, a provisional diagnosis of left sideperiapical abcess due to intralesional corticosteroid injections was hypothesized. To confirm the diagnosis, ultrasonography of the left cheek area was done using a 7.5MHz linear transducer which disclosed hypoechoic collection of size measuring about 17x14 mm in subcutaneous planes of left cheek with inflamed adjacent fat edema. The area demonstrated 'squish sign' on compression suggestive of an abscess. Hence abscess in leftside of mandible was considered as a final diagnosis. With aseptic precautions, aspiration of the swelling was carried out intraorally for decompression under local anesthesia. Thereafter, intraoral incision was given in left buccal mucosa and the abscess was drained. The patient was empirically recommended antibiotic amoxicillin in combination with clavulanic acid (625 mg) and metronidazole (400mg). The pus was sent for a culture which had no growth of microorganisms even after 72 hours. The extraoral swelling completely resolved within one week and no recurrence has been reported in last six months.

DISCUSSION

Oral submucous fibrosis is one of the most common potentially malignant disease of the oral mucosa whose pathophysiology is poorly understood and thus treated unsatisfactorily. Literature suggested many modalities of local drug therapy like injection ofdexamethasone, hyaluronidase, and placental extracts, vitamin A etc as combination or single therapy (Katharia *et al.,* 1992; Lai *et al.,* 1995; Borle and Borle, 1991). many clinical trials are conducted using steroids like cortisone, dexamethasone which shows most successful results among nonsurgical treatment. Steroids are most potent anti-inflammatory andantifibrotic agent which interferes with fibroblast proliferation and collagen deposition. Gupta D noticed that intralesional injection of cortisone and dexamethasone gives better outcome (Gupta and Sharma, 1988). But in contrast to this, Borle reported that frequent injections at multiplesites leads to aggravated fibrosis and pronounced trismusdue to repeatedly needlestick trauma (Pindborg *et al.,* 1970; Sinha and Jain, 1978).

The side effects of intralesional steroids as facial space infection during treatment of OSMF are rarely reported. In our present case, abscess formation occurred in left buccal side of mandible which can occurs due to inoculation of oral micro-organisms to the deeper tissues during the injections. However, the fluid after aspiration of abscess when sent for culture, demonstrates no microbial growth, proving our diagnosis of a sterile abscess. Very rarely, such instances of abscess formation in other regions of body like foot, spinal epidural etc seen after corticosteroid injections (Theodore *et al.,* 2005). Although steroids are frequently used drug for the treatment of OSMF, but as it is a "double-edged sword", the merits and demerits should be weighted and if such type of idiosyncratic reaction occurs, treatment should be stopped immediately.

Ethical disclosures

Protection of human and animal subjects: The authors declare that no experiments were performed on humans or animals for this study.

Right to privacy and informed consent: The authors declare that written informed consent was taken from the patient.

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