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Case Report

Non Syndromic Isolated Commissural Lip Pit – Case Report

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ABSTRACT:
Lips essentially represent a valve structure like other body valves, in that they are like a spring (fixed at one while free at the other end) that control the opening of the oral cavity. Developmental anomalies of lip often are not grossly disfiguring and most of them present as anomalies that are difficult to identify. Commisural lip pits (CLP) are basically mucosal invaginations which are usually found associated with syndromes like popliteal pterygium syndrome or Van der Woude syndrome. We present a male patient aged 43 years who reported for restoration of endodontic treated teeth in relation to maxillary right posterior teeth. Routine examination revealed the presence of commissural pit that was about 4 mm deep. No discharge was reported by the patient. A physician ruled out the existence of any skeletal, cardiovascular or genital signs or symptoms to rule out syndrome. Porcelain fused to metal crowns, were cemented on the endodontically treated teeth.
Key words: Vander Woude syndrome, popliteal pterygium syndrome, oral-facial-digital syndrome, porcelain.

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INTRODUCTION

Human lips, although not classified as an organ of the body are nevertheless an important part of the body since they are visible and serve important functions in food intake, articulation of speech sounds and have an erogenous function in expressing love as well as other emotions like anger. Acquired pathology that is common to lips ranging from a simple traumatic ulcer (9%) [1] to complex benign or malignant lesions (Squamous cell carcinoma, Mucocutaneous keratoacanthoma).[2] Congenital malformations found in the lips often follow a dominant hereditary pattern and often present as a syndrome. Lip pit, first described by DeMurquay in 1845,[3] is a congenital anomaly of the lip which often shows bilateral occurrence and symmetrical distribution usually on vermilion or mucocutaneous areas of the lip. [3] Three types of lip pits have been identified in the literature based on their location: median maxillary lip, median mandibular lip and commissural pit. [4,5] Depending upon the location the clinical appearance varies from circular or transverse slit and often contain a sinus tract that extends into the orbicularis oris muscle.

Commissural lip pits (CLP) occur peculiarly lateral to typical lip pits, present as mucosal invaginations at the corner of the mouth. [6] The prevalence rates of CLP in adults has been reported to range from 0.3% to 21.1%, [7] with a higher predilection in females than males and blacks than whites. [8] It has been found to occur either as an isolated defect or more commonly associated with other developmental disturbances (popliteal pterygium syndrome, Van der Woude syndrome, oral-facial-digital syndrome).[9,10] CLP occurs frequently bilaterally within commissure, and when it occurs as unilaterally, it is not yet established that which side has more predilection. This case report fulfills two objectives, one is to present a rare occurrence of sporadic CLP which will help to add to existing data in determining the prevalence rate of such cases and secondly to serve as a data for future reference for the occurrence of a unilateral non syndromic lip pit on the left side of the oral cavity.

CASE REPORT

An adult male aged 43 years reported to the undergraduate clinics in the course of clinical fixed Prosthodontics with a history of endodontically treated multiple maxillary posterior tooth that needed to be protected with single unit fixed partial denture in the form of crowns. Patients medical, dental, social and drug history were non-

significant for the anticipated treatment. Extra oral examination disclosed no lymphadenopathy, normal temperomandibular joint and mandibular movements. Examination of the lips disclosed presence of long maxillary lip, a high lip line, hypermobile mandibular lip and a unilateral pit on the left commissure (Fig 1A) which would be obscured during the normal lip closure (Fig 1B). The CLP was about 3 mm in length (from lower margin on the lower lip to upper margin on upper lip) while the depth was about 4mm (measured with a graduated periodontal probe).

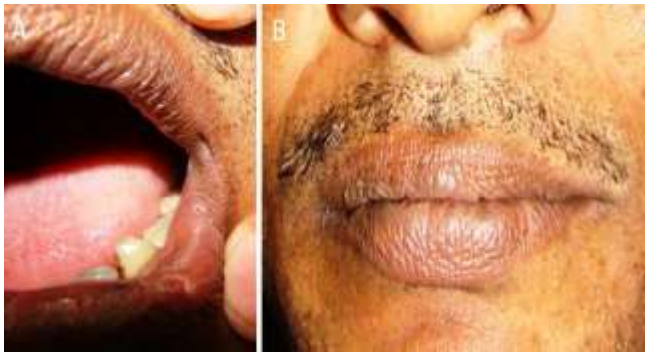

Figure 1: (A) Lip pit on the left commissure (B) Obscured lip pit under normal lip position

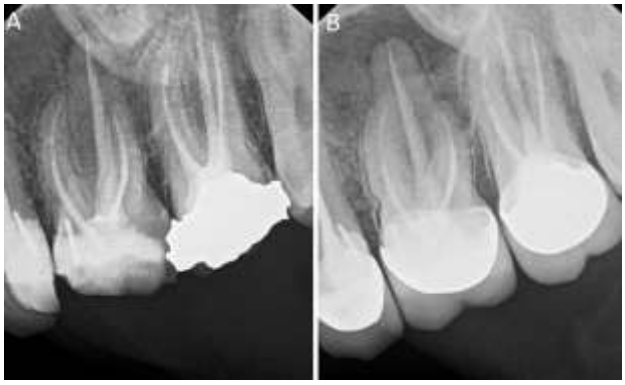

Figure 2: (A) Endodontic treatment in relation to maxillary right second premolar, first and second molar (B) Post cementation x ray showing margins

The surface was dry and did not ooze any secretion on milking of the pit. Resistance to probing was verified after repeated administration of a periodontal probe to rule out the presence of a sinus tract. After identifying the CLP, a more detailed general examination was done that included mental and physical (skeletal, cardiovascular, genital and appendages) by a general physician to rule out the association of the syndrome. Intra oral examination disclosed endodontically treated maxillary right side second premolar, first and second molar. Radiographic investigation revealed a well defined obturation in all root canals (Fig 2A) with permanent restorations that was adequately retained. Routine clinical and laboratory procedures for the individual crown (metal fused to ceramic) restoration were made to restore all endodontically treated teeth. Individual crowns were cemented using zinc phosphate cement (Harvard) following which a post cementation radiograph was taken (Fig 2 B) to verify the fit of the crowns. The patient was given instructions regarding oral hygiene maintenance, including that for the commissural pit.

DISCUSSION

The prevalence rate of sporadic CLP is not specified in the literature, however the prevalence of lip pit in syndromes like Van der Woude syndrome (VWS) varies from 1:40,000 to 1:100,000 stillborn or live births. [10,11] The development of lip pit is well documented and commonly occurs due to a micro deletion on chromosome bands (1q 32-q41.10).[12] When a lip pit is associated with a sinus, it occurs during 10th to the 14th month of intrauterine life when evanescent source fails to close thus leading to fistulae formation in the lip pit. [13] Presence of accessory salivary gland ducts draining into these tracts creates salivary pooling in lip pits. [14] Physically pits result due to notching of the lip where the tissues get fixed at the base of the notch thus giving it typical invaginated hollow appearance. Since CLP is a class of lip pit and congenital lip pits have been found to have a strong association with various syndromes which also have dental manifestations, it becomes important for every dental practitioner to have knowledge and understanding of his role, if and when, he comes across such cases. In this case, after the identification of the lip pit, a thorough clinical examination was conducted that included referral and opinion to departments of oral medicine and general medicine to rule out hidden condition. It has also been recommended to send the patients for genetic counseling since there is likelihood of offspring of cleft patients with lip pits to have a cleft lip or cleft palate than in cleft patients without lip pits. [11] Clinically, sporadic commissural lip pits that are non syndrome should be differentiated from chronic angular chelitis (CAC) and congenital lip pit. CAC is differentiated from CLP on the basis of history. [15] Congenital lip pit is differentiated on the basis of location. In our case, the patient also had reduced vertical dimensions of occlusion due to occlusal wear which manifests externally as accentuated folds at the corner of the mouth which in turn favors salivary accumulation and fungal infections like CAC.

The pit should be palpated with a lacrimal or a periodontal probe and pressure should be applied from inward to outward in order to determine the presence of any body fluid (pus, blood, saliva, cystic fluid). Gutta percha cones are inert as well as radio opaque, and can be used for radiographic differentiation between a shallow pit or a tract. CLP does not require any treatment unless it is isolated and does not present a sinus, fistula or a tract. While an epithelial growth in the region of the lip may impair function, [16] presence of lip pits is almost innocuous in nature and do not create disturbances unless infected.

CONCLUSION

This report of an adult male presents a case of an isolated, unilateral congenital commissural lip pit in an otherwise healthy patient with no family history. Such pits are often associated with other genetic abnormalities that involve oral cavity and natural dentition thus signifying the importance of identifying such abnormalities during routine dental treatment.

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