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CASE REPORT

INTRAORAL NODULAR FASCIITIS IN THE POSTERIOR MAXILLARY GINGIVAL REGION- A RARE CASE REPORT

P. Prathyusha [1], Harshini Togaru [2], B. Haripriya [3]

1. **Dr. Prathyusha.P* ,Professor and Head of Department, Department of Pedodontics, CKS Theja institute of dental sciences,Tirupathi.**
2. **Dr. Harshini.T, Assistant professor, Department of Pedodontics, CKS Theja institute of dental sciences and research, Tirupathi.**
3. **Dr.Haripriya,Post Graduate student,Department of Pedodontics,CKS Theja institute of dental sciences and research,Tirupathi**

Corresponding Author: Dr P.Prathyusha, CKS Theja Institute Of Dental Sciences And Research,Tirupathi

Abstract

Rapidly growing soft tissue lesions in the oral and maxillofacial region may pose diagnostic challenge for the clinician to plan different treatment modalities. One such lesion is Nodular Fasciitis (NF) which is a benign, reactive proliferation of fibroblasts and myofibroblasts, typically arising in subcutaneous fascia most probably in response to local injury. Although commonly seen in upper extremities (50%) orofacial NF is less common with an incidence of less than 20% primarily affecting adults in the fourth and fifth decades of their life. NF is even more rarely seen in children and accounts for less than 4% cases that occur in first decade of life. It is extremely difficult to diagnose clinically, which subjects the patient to undergo extensive surgery and ensuing deformity. Histopathological investigations play an important role in diagnosis of this lesion. Treatment is complete excision and prognosis is good. A rare report of NF in a 4 year old boy is described in the paper.

Key Words: Nodular Fasciitis, Electrocautery, Fibroblasts

INTRODUCTION

Nodular fasciitis has been also called nodular fibrositis, subcutaneous fibromatosis [1], pseudosarcomatous fasciitis, proliferative fasciitis, subcutaneous pseudosarcomatous fibromatosis and infiltrative fasciitis [2, 3]

It is an uncommon progressive, rapid proliferation of fibroblasts and myofibroblasts which typically arises from the subcutaneous fascia. It was first reported by Konwaler et al in 1955. They described it as subcutaneous pseudosarcomatous fibromatosis[4] However Price et al used the term Nodualr Fascitis.[1]

Nodular fasciitis can occur at any age group, but it most commonly occurs in adults in fourth and fifth decades of life [5, 6]. It accounts for 0.025% of all pathologic diagnoses, with less than 4% of those cases occurring in children aged 0–9 years of age [7, 8] . Males and females are equally affected. The most common site of occurrence in the order of decreasing frequency are the upper extremities (48%),trunk (20%), head and neck (15-20%), lower extremities (15%). Of all the sites Nodular fasciitis of head and neck region is common in children.

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CASE REPORT:

A 4 year old boy presented to the Department of Pediatric dentistry with a swelling in the upper right back tooth region since 4 months. Parent gave history of trauma a day before she noticed swelling. Patient did not receive any treatment or medication for the same. There was no significant medical history. On examination the lesion measured 2×3 cms on buccal surface and 2×2 cms on lingual surface. It was reddish, firm, nodular, sessile and non tender. The lesion was present on gingiva extending superiorly into the buccal vestibule and inferiorly 3mm below the occlusal plane in relation to 54 and 55[Figure 1].Submandibular lymph nodes were palpable.

Investigations included Intra oral periapical radiograph, occlusal radiographs and complete hemogram. Radiographs revealed no significant abnormalities except for the displacement of 55 which was well observed clinically.

The child was scheduled for excisional biopsy and complete resection of the lesion. Consent from the parent was obtained. Under nitrous oxide inhalational sedation, and local anesthesia the lesion was resected intoto using Electrocautery(ART-E1 BONART CO.,LTD 115V±10% 50/60 HZ 1.8A 210VA Working frequency 1.5 ~1.7MHZ ±5). Later curettage was done to remove the residual tissue. Hemostasis was achieved and the surgical site was left to heal by secondary intention. The lesion was submitted for histopathology.

Histopathology of given section showed parakeratinized stratified squamous epithelium with a fibro vascular connective tissue. The epithelium was edematous (Figure 2).The connective tissue showed dense collagenous stroma composed predominantly of plump, immature appearing fibroblasts. The fibroblasts were arranged in short, irregular bundles and fascicles with varying size and shape with oval pale staining nuclei. A minimal chronic inflammatory cell infiltrate predominantly of lymphocytes is evident (Figure 3). Based on this histopathological finding it was diagnosed as Orofacial Nodular Fasciitis.

Recovery, healing was uneventful and prognosis was good. After one year follow-up, there were no signs of recurrence. (Figure 4)

Pre operative view

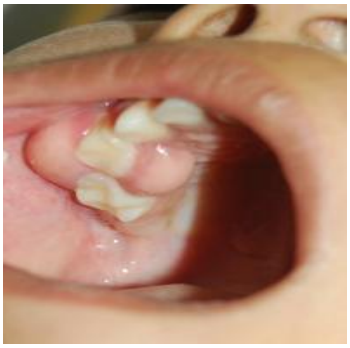

Figure: 1

Histopathology pictures

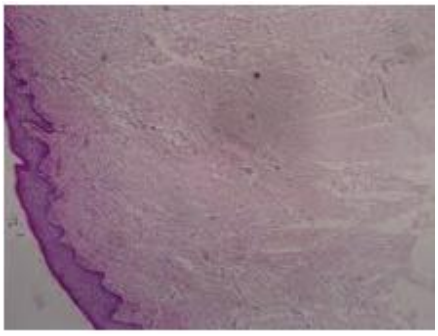

Figure: 2

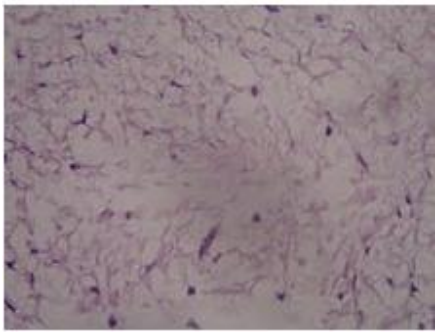

Figure: 3

Post operative view -

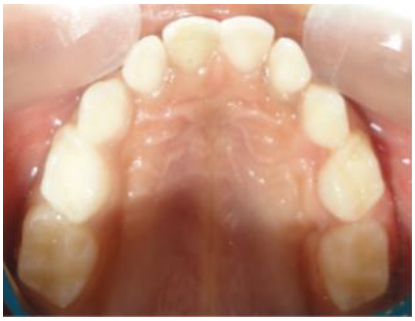

Figure :4

DISCUSSION:

Oro facial nodular fasciitis is a benign lesion characterized by a progressive or rapid fibroblastic proliferation possibly in response to a local injury or infection. Nodular fasciitis is defined by the World Health Organization as a benign and reactive fibroblastic growth extending from the superficial fascia into the subcutaneous tissue or muscle.

The exact cause of nodular fasciitis is still unknown, but there is little doubt that it is the result of a self-limiting, reactive process rather than a true neoplasm. Most authors believe that the lesion represents some type of reactive or inflammatory condition triggered by local injury or infection [2, 3, 9, 10, 11] Stout [12] noted that some of his patients with nodular fasciitis had a history of trauma preceding the appearance of the lesion. However, if prior injury plays a role, it is difficult to explain why trauma is reported in only 10% to 15% of cases and why the lesion is most common in the upper half of the body.[3] The term “fasciitis” implies that the lesion originates in the fascia and that it is of an inflammatory nature, but neither of these aspects has been proven.[10] Although the oral cavity is subject to repeated trauma, intraoral nodular fasciitis

is extremely rare, perhaps because fascia is not prominent in the oral cavity.[11] However in this case, parent recounted the history of trauma prior to the initiation of lesion.

Clinically, it appears as a solitary, firm, indurated, mobile mass with a history of progressive or rapid growth over a short period of time, and is occasionally associated with a history of pain [13, 14]. Perineural extension, which may be responsible for the pain reported by some patients [3], is sometimes observed. In this case patient did not experience any pain. Macroscopic appearance is unreliable for diagnosis, since the lesion may be situated in subcutaneous, intramuscular or fascial tissues [3, 15]

Diagnosis of orofacial nodular fasciitis is extremely difficult, many a times it may be misdiagnosed as fibromatosis, fibrosarcoma, lipoma which bears close resemblance to the lesion. fibromatosis is typically seen in young adults with female predilection which are slow growing and mostly situated in shoulder and trunk. Histologically it is more infilterative, produces more collagen and is less cellular. Fibrosarcoma typically presents in young adults, rapidly growing secondary ulcerations and it is locally destructive with metastatic tendency. Histopathology exhibits infilterative and herring bone pattern. Lipoma generally presents as slow growing well circumscribed, soft, rounded or lobulated, movable against the overlying skin and with cystic consistency. Histology reveals mature adipocytes surrounded by thin connective tissue capsule.

Histopathology of the present lesion revealed none of these findings. Hence considering all these, the diagnosis has been given as orofacial NF.

Elective surgery is frought with complications like extensive tissue destruction, scar tissue and severe deformity. Hence treatment of choice was electrocautery due to some of the advantages like less tissue destruction, less bleeding and better hemostasis, less scar tissue and less chair side time. It also lessens the chances of recurrence due to destruction of residual cells by heat generation. Hence electrocautery can be considered a better alternative to conventional surgery.

CONCLUSION:

The clinicians must be astute in diagnosing orofacial NF by a thorough history, clinical and histopathological examination combined with timely intervention to curtail the deformity and psychological trauma to the patients and the parents.

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