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# Fibroma in children: Case report and literature review

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***Abstract*---**Fibroma is a benign, tumor-like growth made up mostly of fibrous connective tissue. It represents hyperplasias instead of true neoplasm, which develops due to irritation to the mucosal tissue resulting in proliferation of the cells. It can form anywhere in the body and usually do not require treatment or removal. In this paper we have presented a case of fibroma treated by surgical excision.

***Keywords*---**Fibroma, Surgical Excision, Excisional Biopsy.

## Introduction

Fibromas are asymptomatic benign growths found frequently in the buccal mucosa, in the fourth decade of life. They are firm, nodular, sessile/

pedunculated growths with a smooth surface. The colour of the lesion is similar to the mucosa or may even be bluish. The lesion can measure up to2 cm in diameter displaying slow growth rate due to low mitotic index[1]. Lesions are often encapsulated, usually well delimited and do not produce metastasis. Microscopically, fibromas appear as a nodular mass of fibrous connective tissue with collagen fibres mixed with fibroblast cells and covered by a keratinized layer of squamous epithelium[2]. Several therapeutic procedures have been described for the treatment of fibromas, which includes surgical excision, cryosurgery, and ablation with lasers like carbon dioxide (CO2) and erbium-doped yttrium aluminium garnet (Er:YAG) lasers[1]. This report presents the clinical features and treatment of a case of fibroma on lower lip treated by surgical excision.

**Case Presentation**

A 7-year-old female patient reported to our clinic along with her parents with the chief complaint of an outgrowth swelling on the left lower lip region. The patient had first noticed the presence of swelling 10 months back, which was asymptomatic and gradually increasing in size. There was a history of discomfort while mastication with no history of pain or pus discharge. The patient later became conscious about the swelling when she noticed bleeding from the area. The patient had no medical history. Family history revealed no significant finding.

**Clinical Features**

Extra-oral examination revealed a marked swelling pedunculated on the left side of the lower lip approximating the left mandibular central incisor. The swelling was reddish – pink in colour and firm in consistency, with no compressibility. There was no rise in temperature, but the lesion was tenderness on palpation. Shape of the swelling was ovoid like a tag, measuring approximately 1.5 cm x 0.7 cm. The swelling was pedunculated with normal appearing overlying mucosa. The surface of the swelling was smooth with indentations (Fig.1). There was no paraesthesia or lymphadenopathy. Hence the provisional diagnosis was presented as 'Fibroma'.

**Differential Diagnosis:**

- Peripheral giant cell granuloma
- Peripheral ossifying fibroma
- Mucocele

**Blood Investigation and Biopsy Report**

Routine haemogram, bleeding time (BT), clotting time (CT), total leucocyte count (TLC), differential leucocyte count (DLC) and excisional biopsy was done to confirm the diagnosis. Hb was 11.2 gram percent, BT was 2 minutes 10 seconds, CT was 5 minutes 35 seconds, TLC value was 7100 cells per cubic millimeter of blood and DLC was as follows - Neutrophil count - 60%, lymphocytes – 32%, eosinophils – 06% and monocytes – 02%.

**Treatment**

The lesion was anesthetized using 2% lidocaine local anesthesia into the mental nerve. Once the lower lip was anesthetised, a circular incision was given around the lesion using scalpel blade no. 15. Then the whole tissue was dissected and removed completely (Fig.2). The wound margins were then approximated using surgical black silk suture number 4-0 (Fig3). Excised tissue was then sent to pathology laboratory for examination. The result depicted atrophic squamous epithelium with fibrous connective tissue stroma below it. The collagen fibres were haphazardly arranged with infiltration of fibroblasts, fibrocytes and chronic inflammatory cells. Hence the findings confirmed the diagnosis as fibroma. The tissue healed completely in 15-20 days.

**Discussion**

Oral fibromas are benign lesions growing in the oral cavity due to continuous irritation. They have many synonyms like reactive hyperplasia, traumatic fibroma, oral polyp, fibrous nodule, and focal intraoral fibrous hyperplasia.

**Causes**

Oral fibromas can be found anywhere in the oral cavity but they are more commonly found on the surfaces of tongue, buccal mucosa, labial mucosa, or gingiva. Any constant localized trauma can lead to tissues' outgrowth, hence the name traumatic fibroma. It occurs as a result of a chronic repair process that includes granulation tissue and scar formation resulting in a submucosal fibrous mass[3]. Main causes are wearing an ill-fitting denture or crown or veneer, compulsive oral habits like biting of cheeks or lips, orthodontic brackets with sharp edges and many more. In the case presented, although there was no direct history of any oral habit or trauma, but a traumatic stimulus could have been inflicted due to lip biting habit or maybe due to trauma from any sharp foreign object.

**Prevalence and Incidence**

People above the age of 30 years are more commonly affected by oral fibroma, and there it is not gender specific[4], but 66% female predilection is seen in cases of irritational fibroma and is usually seen in the 4th to sixth decades of life[5]. In our case, the patient was younger than 30 years of age, which contrasts with the finding described in the literature. Fibromas have a prevalence of 3.25% among the adult Swedish population[4]. Out of 300 benign tumors of the oral mucosa, 53% tumors were diagnosed histologically as fibromas[6]. It is the most frequently found benign tumor of the oral cavity.

**Signs and Symptoms**

The lesion have variety of appearances due to different shape, size, structure, and consistency as it may vary depending upon the composition of the fibroma. Oral fibromas can be either sessile (broad base with no stalk) or pedunculated (a stalk connecting the outgrowth of tissue to the underlying

tissue)[1]. Oral fibroma most commonly does not cause any symptoms. They appear as firm nodule or growth. The color is similar to normal mucosa but sometimes it may appear bright-pink in color due to constant trauma and bleeding.

**Diagnosis**

A fibroma is diagnosed based on the location of soft tissue swelling. A swelling located on the lower lip may be a mucocele, lipoma, fibroma, or salivary gland tumor. A swelling on tongue may possibly be a neurofibroma, neurilemmoma, or granular cell tumor[7]. Few points can lead to diagnosis of fibroma like –

- Any history of trauma at the site of growth that could possibly be caused by a dental prosthesis or any biting habits,
- Presence of ill-fitting dental prosthesis,
- Malaligned teeth that might injure the soft tissues during occlusion,
- A biopsy may be performed to exclude other conditions like Cowden syndrome, tuberous sclerosis, familial fibromatosis, and fibrotic papillary hyperplasia of the palate.

Fibromas must be differentiated from a peripheral ossifying fibroma (firm nodule found only on the gingiva with calcified material in the stroma) and a peripheral giant cell granuloma and pyogenic granuloma (both are more vascular and may bleed when palpated)[8].

**Management**

Fibromas are generally treated using surgical excision using scalpel which might need a suture. This may cause permanent scarring of the tissues and also cause unwanted blood loss. There are variety of other treatment options available like cryosurgery, electrocautery, ablation with lasers like $CO_2$ lasers, Er:YAG lasers, Nd:YAG lasers, intralesional injection of ethanol or corticosteroids, and sodium tetradecyl sulfate sclerotherapy[1]. Laser removal minimizes the scarring after removal. Risk of malignancy in fibromas are rare[i] also the rate of recurrence is low[7].

The excised tissue is then sent for biopsy to rule out the presence of other conditions that mimic oral fibromas. The next and most crucial step is to remove the presence of any object or ill-fitting prosthesis that caused the lesion. The sharp edges of the tooth can be rounded off to avoid future trauma. Orthodontic treatments can correct any tooth that is malaligned. Dental crowns or fillings should be smoothed too to avoid further irritation. Any habits like lip biting or cheek biting should be corrected by counselling and habit breaking appliances.

Oral fibroma is a benign condition, and they rarely become malignant. Clinicians should consider the possibility of diagnosing irritation fibroma in younger age groups. Proper diagnosis and treatment are necessary to remove oral fibroma. Also, any sharp edges, ill-fitting dentures, or habits that caused constant trauma to the tissues must be corrected to avoid further injury, which might lead to recurrent oral fibromas.

Fig.1 Pre-operative nodule

Fig.2 Tissue dissection done

Fig.3 Suture placed

**Why is this paper important to Paediatric Dentistry?**

1. Fibroma is an uncommon finding seen in paediatric patients.
2. Its diagnosis and management should be known clearly to all dentists.
3. Here, we have presented a case along with review on fibroma in paediatric patients.

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