ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 10, Issue, 04, pp.67841-67843, April, 2018

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

CASE REPORT

A RARE CASE OF IRRITATION FIBROMA IN A 10 YEAR OLD CHILD – DIAGNOSIS AND TREATMENT

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ARTICLE INFO

Article History:
Received 10th January, 2018
Received in revised form
26th February, 2018
Accepted 09th March, 2018
Published online 30th April, 2018

Key words:
Irritation fibroma, diode laser,
Excisional biopsy, children.

ABSTRACT

In general gingival overgrowths are one of the most frequently encountered lesions in the oral cavity. These are caused by various etiological factors and every lesion displays a characteristic set of features. Irritation fibroma is a common benign exophytic oral lesion that develops secondary to tissue injury and is among the most common benign reactive lesions. It is extremely rare during the 1st decade of life. The present article reports a rare case of an Irritation fibroma present on the buccal aspect of the gingiva in lower anterior region in a 10 year old boy which was removed with a diode laser. The case was followed up with thorough scaling and oral hygiene maintenance instructions to eliminate the cause of reoccurrence.

Citation: Dr. Nithi N. Rajadhyaksha and Dr. Shilpa S. Naik, 2018. "A rare case of irritation fibroma in a 10 year old child – diagnosis and treatment", *International Journal of Current Research*, 10, (04), 67841-67843.

INTRODUCTION

The oral cavity is a dynamic region that is constantly exposed to various external and internal stimuli, resulting in a myriad of diseases, from developmental to reactive and neoplastic. There are several oral soft tissue lesions in paediatric patients with different clinical presentations (Shafer *et al*., 2007 and Farista *et al*., 2015). In general gingival overgrowths are one of the most commonly and frequently encountered soft tissue lesions during clinical examination (Pai *et al*., 2014). The aetiology and pathogenesis of gingival lesions are still not well established. Most of these lesions are as a result of trauma or chronic irritation (Ghadimi *et al*., 2015). Fibroma of the oral mucosa is the most common benign neoplasm of the oral cavity which resembles growth and is derived from fibrous connective tissues. A fibroma is an inflammatory hyperplastic lesion of the connective tissue which results due to hyperplasia of constituent cells. A fibroma of the oral mucosa is most commonly seen in older adults but can occur at any age, with a prevalence of 1-2%. In children, it usually occurs due to chronic irritation from sources such as lip/cheek biting, pencil/ nail biting, overhanging restorations, poor oral hygiene (calculus), sharp tooth edges, or other oral prosthesis (Thakur *et al*., 2016 and Mishra and Pandey, 2016).

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Recurrence rate is low but may be caused by repetitive trauma at the same site. Clinically, fibroma represents as an asymptomatic lesion that is either sessile or occasionally pedunculated; the affected site can be firm and resilient or soft with a spongy consistency. Colour is usually similar to the oral mucosa (Valério *et al*., 2013). Several therapeutic procedures have been described in literatures for management of fibroma of which Diode laser has been recommended because of it's with various advantages (Kohli *et al*., 2016). The present case report describes a rare case of an Irritation fibroma present on the buccal aspect of the gingiva in lower anterior region in a 10 year old boy which was treated by removal of the lesion with a diode laser, followed by thorough scaling and oral hygiene maintenance instructions.

Case report

A 10 year old boy reported to the Department of Pedodontics and Preventive Dentistry, with a chief complaint of a soft gingival overgrowth in lower front teeth region since 6 months. As per the history given by the parent a similar lesion was noted at the same place one year back which was surgically excided with a scalpel in a private clinic. No follow up protocol was then maintained. A detailed medical history was taken but no relevant medical issue or allergies were noted. On extra oral examination no asymmetry or deformity was noted with respect to the facial profile. Clinical examination showed

no lymph node enlargement. On intraoral examination, the lesion appeared to be a whitish, oval shaped, painless, well defined and pedunculated gingival overgrowth (Figure 1). The overgrowth had a firm consistency was smooth and shiny in appearance. The border of the overgrowth near the gingival attachment was slightly reddish than normal mucosa. It measured about 1.7 x 2.2 cm in diameter. Laboratory investigations were performed which revealed no systemic condition. An intraoral periapical radiograph was taken which showed no associated bone changes (Figure 2). The line of treatment was explained to the parents, and an informed consent was obtained before the surgical procedure. A conservative surgical excision with diode laser was carried out, under local anaesthesia. The procedure was done in contact mode. Surgical assistant grasped the gingival growth with tweezer and retracted with minimum tension. The fiberoptic tip was placed at the periphery and gradually moving around the lesion, continuously firing the laser to dissect out the fibroma completely (Figure 3a and 3b). The excised tissue was immersed in a 10% formalin solution and sent for histopathological examination. Antibiotics were not prescribed. Patient was instructed to apply Evion®400 thrice daily for 5 days. Patient was given strict oral hygiene instructions to maintain oral hygiene. Patient was recalled after 1 week to evaluate the healing which was uneventful. Recurrence was not reported on 12 months follow-up (Figure 4a and 4b).

Histopathology

The biopsy of the soft tissue was done and microscopic features were found which showed H an E stained section with parakeratinized stratified squamous epithelium, underlying connective tissue stroma shows numerous chronic inflammatory cells and blood vessels (Figure 5).

Figure 1. Gingival overgrowth

Figure 2. Periapical radiograph showing no associated bone changes

Figure 3a. Surgical excision with laser

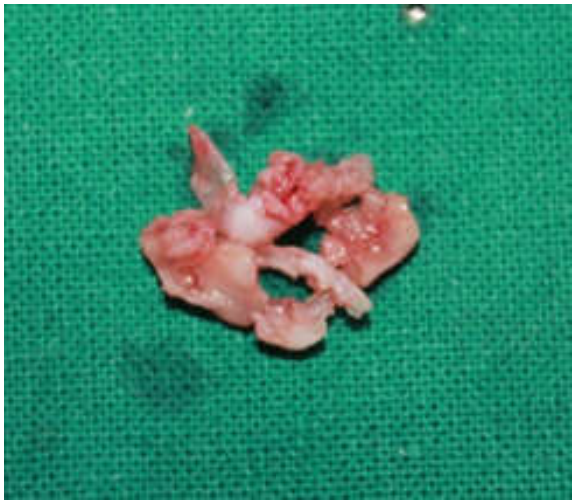

Figure 3b. Excised soft tissue

Figure 4a. 1 week follow up

Figure 4b. 12 months follow up

DISCUSSION

Traumatic fibroma is a local reactive growth and proliferation of mucosa of the oral cavity in retort to injury or irritation. It occurs as a result of a chronic repair process that includes granulation tissue and scar formation resulting in a submucosal

fibrous mass (Bhayade *et al*., 2015). In the above discussed case, the patient presented with typical clinical features of irritation fibroma resulting from inability to maintain adequate oral hygiene due to malaligned lower incisors. Both clinical and histological features lead to final diagnosis of irritation fibroma. Recurrence of irritation fibroma is rare or uncommon. It may reoccur if the source of irritation or trauma is not removed. The best line of treatment is conservative surgical excision of the fibrous mass followed by management of source of irritation (Thakur *et al*., 2016, Mishra and Pandey, 2016 and Bhayade *et al*., 2015). In our present case report, surgical excision with diode laser was chosen as a treatment modality, over the conventional scalpel surgery. Laser surgery is superior to scalpel surgery for several advantages, including the need of small amount of local anesthetic agents, better cutting precision with laser than with the scalpel , a clearly visible cut and a more rapid haemostasis, because the lasers plugs the lymphatic and blood vessels, low risk of post-operative infections because the laser beam sterilizes the tissue simultaneously with cutting and minimal post-operative pain and swelling, which leads to faster post-operative healing and decreased scar formation (Kohli *et al*., 2016, Funde *et al*., 2015 and Nazemisalman *et al*., 2015). Moreover laser technology provides optimal care and can increase the cooperation of pediatric patients. The patient in the present case reported with good prognosis and an uneventful post-operative recovery and was advised to maintain oral hygiene thoroughly.

Conclusion

Soft tissue lesions should be diagnosed clinically and histopathologically to arrive at definitive diagnosis, as such lesions can be seen at variable sites. The Irritation Fibroma being asymptomatic is not a matter of concern to the patient till it grows in size or it interferes in normal function. So it is very important to rule out the lesion and its cause, to improve the prognosis and reduce the recurrence by planning definitive treatment. This case evaluates the clinical effectiveness for incorporating lasers as a regular tool in pediatric dental practice as it is a relatively simple and safe procedure.

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