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CASE REPORT

Pregnancy Tumor– A Case Report

Sahithi Ram. V[1], M.S. Raju[2], T.S.S.H. Chandana[3], T. Harika[4], Supriya Das[5], Sunnapu Akshitha[6]

[1]Post Graduate Student, Department of Oral Medicine and Radiology, St. Joseph Dental College, Duggirala, Eluru, Andhra Pradesh, India
[2]Professor and Head of Department, Department of Oral Medicine and Radiology, St. Joseph Dental College, Duggirala, Eluru, Andhra Pradesh, India
[3,4,5,6]Intern, St. Joseph Dental College, Duggirala, Eluru, Andhra Pradesh, India

Corresponding Author
Sahithi Ram V
Post Graduate Student, Department of Oral Medicine and Radiology, St. Joseph Dental College, Duggirala, Eluru, Andhra Pradesh, India

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ABSTRACT
Pyogenic granuloma, a soft-tissue growth that is frequently reported in the oral cavity, thought to be reactive rather than neoplasia. Although they can develop at any age, more common in the second decade of life. A new avenue for the treatment of numerous illnesses has been made possible by lasers. Considering both the practical and aesthetic aspects, laser treatment of soft tissue intraoral mucosal lesions has significant impact on patient acceptability. In contrast to the conventional way of surgical excision, the patient can receive Laser therapy without being afraid of surgery. This article presents a case report of a 20-year-old pregnant woman with a pyogenic granuloma in the maxillary right posterior buccal and hard palatal region in connection with first and second premolars, treated using a diode laser.
Keywords: Pyogenic granuloma, Pregnant tumor, Laser

INTRODUCTION

Pyogenic Granuloma (PG) also called as “Granuloma Pyogenicum”, is a common benign mucocutaneous lesion that is displayed by an exuberant tissue that is brought on by local irritation or trauma. The term pyogenic granuloma was applied based on an identical lesion on the skin, thought to be caused by pyogenic organisms. Pyogenic granulomas typically manifest clinically as a soft, lobulated, pedunculated, or sessile nodular mass that is often hemorrhagic. They can range in size from a few millimeters to several centimeters, and they are primarily found in the marginal gingiva, followed by the palate, buccal mucosa, tongue, and lips. Pregnancy tumors are histologically comparable to pyogenic granulomas of the gingiva, which frequently occur during pregnancy. This lesion is well-defined, starts about the third month of pregnancy or occasionally later, grows in size over time, and may or may not recede after birth. Excisional therapy is the preferred treatment for this non-neoplastic growth, but other methods like cryosurgery, Nd:YAG laser excision, flash lamp pulsed dye laser, corticosteroid or ethanol injection, and sodium tetradecyl sulfate sclerotherapy have also been shown to be successful. Anecdotal reports of diode laser treatment of mucosal pyogenic granulomas are the only available data. The goal of this paper is to demonstrate the therapeutic efficacy of diode laser in the management of intraoral pyogenic granuloma.

CASE PRESENTATION

A 20-year-old pregnant woman of third trimester, came to the department of oral medicine and radiology, St. Joseph Dental College, Duggirala, Eluru, with a complaint of growth in the right upper back teeth region in the past 2 months. Patient gives history of growth impinging in between the teeth while biting, chewing food and history of bleeding from that region while brushing. Anintraoral examination revealed that, on inspection, a diffused growth seen in the right maxillary posterior region involving the 1st and 2nd Premolars of size approximately 0.5X0.5 cm extending Antero Posteriorly involving the marginal, attached and interdental gingiva of 14, 15 in buccal aspect and extended interdentally to palatal aspect. Color of lesion is erythematous. On palpation, all inspectory findings are confirmed. Growth is non-tender, firm in consistency, smooth in texture, non-compressible, non-reducible, sessile, blood discharge is evident on palpation. Clinical diagnosis was given as Pyogenic granuloma and the differential diagnosis was given as Peripheral Giant Cell Granuloma. Treatment plan was

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discussed with the patient. She was advised to have an excision with Diode laser to reduce the bleeding tendency of the patient. Routine blood investigations advised to the patient.

Figure 1: Buccal aspect irt 14,15

Figure 2: Palatal aspect irt 14,15

Figure 3: Indirect View Palatal aspect irt 14,15

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Test Name	Result	Units	Reference Range
DEPARTMENT OF HAEMATOLOGY			
BT CT			
Bleeding Time	1 min 00 sec		1 - 3 minutes
Clotting Time	3 min 35 sec		3 - 7 minutes
COMPLETE BLOOD PICTURE			
Hemoglobin	11.5	gm%	Male : 12.0 – 18.0 gm % Female: 11.0 – 16.0 gm %
RBC count	3.66	mill/cumm	3.5 - 5.5 mill/cumm
PCV	33.8	PERCENTAGE	40-50%
MCV	92.3	FENTO/LITERS	80-100FL
MCH	31.4	PICO/GRAMS	27-32Pg
MCHC	34.0	GRAM/DESI LITERS	32-34g/dl
RDW	14.1	PERCENTAGE	11.6-14.0%
Platelet Count	2.76	Laks /cumm	1.5—4.5Lakh/cumm
Total WBC count	11.29	cumm	4,000 – 11,000/cumm
DIFFERENTIAL COUNT			
Neutrophils	72	%	55 – 70%
Lymphocytes	22	%	25 – 40%
Eosinophils	01	%	01 - 08%
Monocytes	05	%	02 – 06%
Basophils	00	%	00 – 01%
DEPARTMENT OF IMMUNOLOGY			
HBs Ag			
HBs Ag	NEGATIVE		
HIV			
HIV I	NON REACTIVE		
HIV II	NON REACTIVE		

Authorized Signature

Figure 4: Blood reports with no abnormality

Treatment Plan

Complete Oral prophylaxis was done primarily and then under Local Anesthesia, lesion was treated with Biolase Diode Laser of 910 nm wavelength, at 3 W continuous wave with a 200-micrometer optical fiber. Histopathological report shows that Para keratinized stratified squamous epithelium with rete peg formation. Connective tissue shows plump fibroblasts, collagen fibers, dense chronic inflammatory infiltrate, budding blood capillaries, and numerous endothelial lined blood vessels with RBC's. These features are suggestive of "PYOGENIC GRANULOMA." After 1 month, the patient returned for a check-up.

Figure 5: Excision of lesion using Diode laser of 910 nm in buccal and palatal aspects

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Figure 6: After removal of the growth

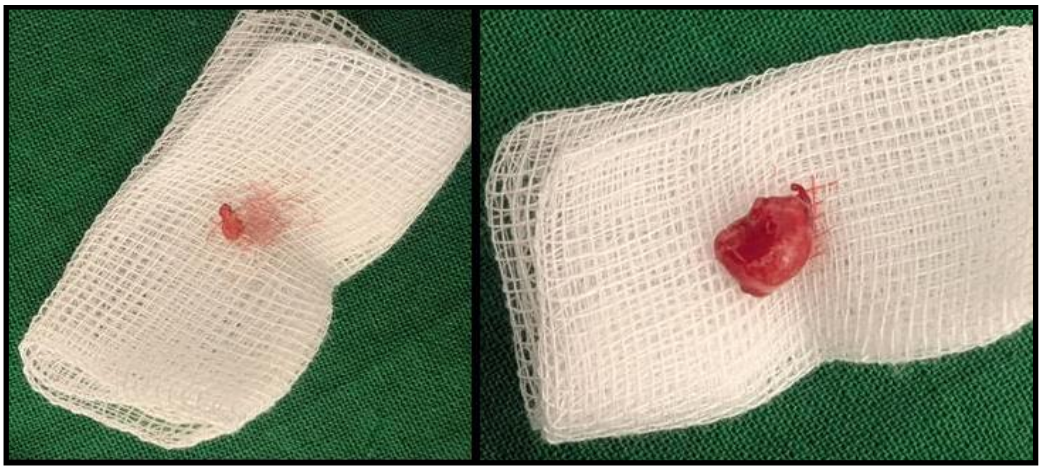

Figure 7: Removal of the growth

MACROSCOPIC FEATURES:

Received two soft tissue bits measuring 1.7x0.9x0.3cm,0.4x0.5x0.2cm size,irregular in shape, creamish black in color, andfirm in consistency with irregular borders.

HISTOPATHOLOGIC FEATURES:

The given H&E-stained section shows para keratinized stratified squamous epithelium with rete peg formation. Connective tissue shows plump fibroblasts, collagen fibers, dense chronic inflammatory infiltrate, budding blood capillaries, and numerous endothelial-lined blood vessels with RBCs. These features are suggestive of pyogenic granuloma.

HISTOPATHOLOGICAL DIAGNOSIS: PYOGENIC GRANULOMA.

SIGNATURE OF PATHOLOGIST

Dr.A. ANURADHA

Figure 8: Histopathological Report

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Figure 9: After 1month of follow-up

DISCUSSION

Pyogenic granuloma (PG) is a neoplastic benign vascular malformation that results in soft tissue excessive hyperplasia. The prevalence of this condition is higher between the second and fifth decade of life, presenting higher expression in women. Despite the lack of a precise etiopathological mechanism, local trauma or chronic irritation may lead to excessive tissue repair stimuli leading to condition development. The clinical presentation is generally of a dull red, sessile, or pedunculated smooth surfaced nodule that may easily bleed, crust, or ulcerate. Lesions may grow rapidly; reach its maximum size, and remain static. They may typically begin as small, red papules that rapidly enlarge to become pedunculated raspberry-like nodules. Rarely, patient may develop multiple satellite angiomatous lesions after excision of a solitary pyogenic granuloma. Lasers such as Nd:YAG, CO2 laser, flash lamp pulsed dye laser have been used for the treatment of oral pyogenic granuloma with success. White et al proposed that laser excision is well tolerated by patients with no adverse effects. They also stated that CO2 and Nd:YAG Laser irradiation is successful in surgical treatment. Meffert et al used the flash lamp pulsed dye laser on a mass of granulation tissue and concluded that previously resolute tissue responded well to the series of treatments with pulsed dye laser.Diode laser has shown excellent results in cutaneous pyogenic granulomas with only minimal pigmentary and textural complications. Gonzales et al demonstrated both symptomatic and clinical clearing of the lesions with excellent cosmetic results in 16 of 18 treated patients. However, there is minimal convincing proof of its efficacy in intraoral pyogenic granuloma. Rai et al used a diode laser of wavelength 808 (±10nm), output energy 0.1−7.0 Watt for the excision of the lesion, and reported that diode laser can be a good treatment option for oral pyogenic granuloma. Akbulut et al reported that diode lasers are useful for soft tissue surgeries of oral cavity due to its specific wavelength 810nm that is absorbed by water and also by chromophores like oxyhemoglobin and melanin. They also stated that diode laser should be used either in contact mode or in close distance to the lesion to be excised. Diode lasers have a higher tissue ablation capacity and hemostatic properties during surgery in contrast to other lasers. The soft tissue diode lasers (diode laser 810nm) have an excellent incision performance in epithelium with a cutting (penetration) depth of 2−6mm into the tissue. Fekrazard et al performed a laser surgery for treating a pyogenic granuloma of a 24-year-old female patient. The lesion was present on the buccal and palatal side of 5 six maxillary teeth. They used Er:YAG laser with 3 W, 10 Hz, 300 mJ and contact mode technique. The patient had nopain after the surgery and was regularly kept on follow-up for the period of 9 months. They concluded that the result was positive; it is a safe and effective technique for lesion excision.

CONCLUSION

The use of laser offers a new tool that can change the way in which existing treatments are performed, or serve to compliment them. Modern medicine needs to explore and take advantage of current trends to derive maximum benefit in terms of technology, patient's acceptance and, post-operative management. Lasers are useful in treating pyogenic granuloma because while excision there is bloodless field, rapid healing and no stitches were required. It is a painless procedure.It reduces postoperative infection and that is why the patient does not require any medications (analgesics or antibiotics) for rapid healing or relief in pain.This method requires less time compared with other surgical technique. The mature or healed pyogenic granulomas are present with firm in consistency and pale in color with blanching. Very few lesions may be reported with calcifications also.

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