

CASE REPORT

Intralesional injection of triamcinolone acetonide for treatment of pyogenic granuloma

Dr. Hadiuzzaman, MD

MBBS, FCPS (Skin and VD), Associate Professor, Dept. of Dermatology and VD, Community Based Medical College, Winnarpar, Mymensingh, Bangladesh

ABSTRACT

Pyogenic granuloma appears in the mouth as an overgrowth of tissue due to irritation, physical trauma or hormonal factors. The term, pyogenic granuloma is misleading because it is not a true granuloma. In actuality, it is a capillary hemangioma of lobular subtype which is the reason they are often quite prone to bleeding. The growth is typically seen in young adults, it may occur in any age, especially in individuals with poor oral hygiene. Females are far more susceptible than males because of the hormonal changes that occur in women during puberty, pregnancy and menopause.

The purpose of this article is to describe a case of pyogenic granuloma successfully treated by intralesional injection of triamcinolone acetonide.

KEYWORDS: Pyogenic granuloma, Intralesional triamcinolone acetonide.

INTRODUCTION

Pyogenic granuloma is a relatively common benign mucocutaneous lesion. The term is a misnomer as the lesion neither contains pus nor it is granulomatous. It was originally described in 1897 by two French surgeons, Poncet and Dor¹. It is considered as a capillary haemangioma of lobular subtype as suggested by Mills, Cooper, and Fechner, which is the reason they are often quite prone to bleeding². The most common intraoral site is marginal gingiva, but lesions have been reported on palate, buccal mucosa, tongue, and lips. Extraoral sites commonly involve the skin of face, neck, upper and lower extremities, and mucous membrane of nose and eyelids.

Being a non-neoplastic growth, excisional therapy is the treatment of choice but some alternative approaches such as cryosurgery, excision by Nd:YAG Laser, flash lamp pulsed dye laser, injection

of corticosteroid or ethanol, and sodium tetradecyl sulfate sclerotherapy have been reported to be effective.¹ In this report, we seek to highlight the therapeutic success achieved with intralesional triamcinolone acetonide injection in the treatment of pyogenic granuloma.

CASE REPORT

A 23-year-old male patient reported to the Out Patient Department of Dermatology and Venereology in Community Based Medical college Hospital, Bangladesh. He complained of localized red growth on right angle of mouth for 3 months. The outgrowing mass was not painful but often bled on scratching, or sometimes spontaneously. There was no history of trauma or drug intake.

Physical examination revealed an oval-shaped mass-like growth seen on right angle of mouth, measuring approximately 0.5cm in diameter. On

Correspondence: Dr. Hadiuzzaman, Associate Professor, Dept. of Dermatology and VD, Community Based Medical College, Winnarpar, Mymensingh, Bangladesh. E-mail: rokon.skin@yahoo.com

palpation, the mass was soft to firm in consistency and readily bled on probing. No exacerbating factors were identified. Based on the clinical findings the case was provisionally diagnosed as pyogenic granuloma.



Fig. 1 Pyogenic granuloma before therapy.

The lesion was treated by intralesional injection of triamcinolone acetonide 15mg/ml mixed with adrenaline, once every 3 weeks for 4 times. Patient was not prescribed any antibiotics, analgesics, or anti-inflammatory medication. He visited every 3 weeks interval for injection. The lesion gradually decreased in size and after fourth visit the lesion cured about 90%.



Fig. 2 Lesion after therapy.

DISCUSSION

Although pyogenic granuloma may appear at any age, 60% cases are observed between the ages of 10 and 40; incidence peaks during the third

decade of life and women are twice as likely to be affected. It is more common in children and young adults³.

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 static⁴. They may typically begin as small, red papules that rapidly enlarge to become pedunculated raspberry-like nodule. Rarely, patient may develop multiple satellite angiomatous lesions after excision of a solitary pyogenic granuloma.

Oral pyogenic granulomas shows a striking predilection for the gingiva, which accounts for 75% of all cases. Gingival irritation and inflammation that result from poor oral hygiene may be a precipitating factor in many patients. The lip, tongue, and buccal mucosa are the next most common sites^{5,6}. In majority of cases, minor trauma and/or chronic irritation are cited in the etiopathogenesis of pyogenic granuloma⁷. Infection may play a role with suggestions of agents such as streptococci and staphylococci⁸. Recently, angiotensin-1,2 and ephrin B2⁹ agents in other vascular tumours such as *Bartonella henselae*, *B. quintana*, and *human herpes virus 8* have been postulated to play a part in recurrent pyogenic granuloma¹⁰. Multiple pyogenic granulomas with satellite lesions may occur as a complication of tumour removal or trauma¹¹. Viral oncogenes, hormonal influences, microscopic arteriovenous malformation along with inclusion bodies and gene depression in fibroblasts have all been implicated^{12, 13}.

Differential diagnosis of pyogenic granuloma includes haemangioma⁵, peripheral giant cell granuloma, peripheral ossifying fibroma and metastatic carcinoma, and amelanotic melanoma⁶.

Although the conventional treatment for pyogenic

granuloma is surgical excision, a recurrence rate of 16% has been reported¹⁴. There are also reports of the lesion being eliminated with electric scalpel or cryosurgery¹⁵. Other methods used by various workers include cauterization with silver nitrate, sclerotherapy with sodium tetra decyl sulfate and monoethanolamine oleate¹⁶, ligation, absolute ethanol injection dye¹⁷, Nd:YAG and CO₂ laser¹⁸, shave excision, and laser photocoagulation¹⁹.

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.¹ 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 laser¹. Diode laser has shown excellent results in cutaneous pyogenic granulomas with only minimal pigmentary and textural complications. Gonzales et al²¹ demonstrated both symptomatic and clinical clearing of the lesions with excellent cosmetic results in 16 of 18 treated patients. One option of treatment is intralesional steroid. We achieved near about complete resolution of the lesion located on the right angle of mouth with intralesional injection of triamcinolone acetonide without producing any complications.

CONCLUSION

Intralesional steroid injection therapy is easy and safe. It may be tried as a 1st line management of pyogenic granuloma.

REFERENCES

1. Jaferzadeh H, Sanadkhani M, Mohtasham M. Oral pyogenic granuloma: A review. *J Oral Sci* 2006; 48:167-75.
2. Shafer, Hine, Levy. In: *Textbook of oral pathology*. 5th ed. the Netherlands: Elsevier Publication; 2006. p. 994-97.
3. Nthumba PM. Giant pyogenic granuloma of the thigh: A case report. *J Med Case Rep* 2008; 2:95. Available from: <http://www.jmedicalcasereports.com/content/2//95>.
4. Nthumba PM. Giant pyogenic granuloma of the thigh: A case report. *J Med Case Rep* 2008; 2:95. Available from: <http://www.jmedicalcasereports.com/content/2//95>.
5. Neville BW, Damm DD, Allen CM, Bouquet JE. In: *Oral and maxillofacial pathology* 3rd ed. the Netherlands: Elsevier; 2004. p. 176-77.
6. Wood NK, Goaz PW. In: *Textbook of differential diagnosis of oral and maxillofacial lesions, USA: Mosby; 5th ed, 1997. p. 32-4.*
7. Greenberg MS, Glick M, Ship JA. In: *Burkett's textbook of oral medicine*. 11th ed. USA: BC Becker Inc; 2008. p. 131-32.
8. MacLeod RL, Soames J. Epilides: A clinicopathological study of 200 consecutive lesions. *Br Dent J* 1987; 163:51-3.
9. Levy I, Rolain JM, Lepidi H. Is pyogenic granuloma associated with Bartonella infection? *J Am Acad Dermatol* 2005; 53:1065-66.
10. Yuan K, Jin YT, Lin MT. Expression of tie-2, angiopoietin-1, angiopoietin-2, Ephrin B2 and EphB4 in pyogenic granuloma of human gingival implicates their roles in inflammatory angiogenesis. *J Periodont Res* 2000; 35:165-71.
11. Janier M. Infection and angiomatous cutaneous lesions. *J Mal Vasc* 1999; 24:135-38.
12. Taira JW, Hill TL, Everett MA. Lobular capillary hemangioma (pyogenic granuloma) with satellitosis. *J Am Acad Dermatol* 1992; 27:297-300.
13. Davies MG, Borton SP, Atai F. The abnormal dermis in pyogenic granuloma. *J Am Acad Dermatol* 2001; 31:342-44.
14. Vilman A, Vilman P, Vilman H. Pyogenic granuloma. Evaluation of oral conditions. *Dr J Oral Maxillfac Surg* 1986; 24:376.
15. Newman, Takei, Carranza. In: *Textbook of Carranza's clinical periodontology*, 10th ed. the Netherlands: Elsevier Publication, 2006, p:176-77
16. Gupta R, Gupta S. Cryo-therapy in granuloma pyogeni-

- cum. *Indian J Dermatol Venereol Leprol* 2007; 73:14.
17. Matsumoto K, Nakanishi H, Seike T. Treatment of pyogenic granuloma with sclerosing agents. *Dermatol Surgery* 2001; 27:521-23.
 18. Ichimiya M, Yoshikawa K, Hamamoto Y, Muto M. Successful treatment of pyogenic granuloma with injection of absolute alcohol. *J Dermatol* 2001; 31:342-44.
 19. Raulin C, Greve B, Hammes S. The combined continuous-wave/pulsed carbon dioxide laser for treatment of pyogenic granuloma. *Arch Dermatol* 2002; 138:33-7.
 20. Kirschner RE, Low DW. Treatment of pyogenic granuloma by shave excision and laser photocoagulation. *Plast Reconstr Surg* 1999; 104:1346-69
 21. Boj JR, Hernandez M, Poirier C, Espasa E. Treatment of pyogenic granuloma with a laser - powered Hydrokinetic system: Case report. *J Oral Laser Appl* 2006; 6:301-6.
 22. Gonzales S, Vibhagool C, Falo LD Jr, Momtaz KT, Grevelink J, Gonzalez E. Treatment of pyogenic granulomas with the 585nm pulsed dye laser. *J Am Acad Dermatol* 1996; 35:428-31. phosphatidyl choline and deoxycholate (50 mg/ml).