



Disseminated Pyogenic Granuloma without Surgical Intervention: A Case Report

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Abstract

Pyogenic Granuloma is a benign neoplastic nature with vascular origin that occurs on skin and mucous membranes of face, trunk and extremities. Surgical shave excision with electro surgery of the base, electro cautery, CO₂ Laser, pulsed dye laser, topical silver nitrate, sclerotherapy and topical imiquimod are the main methods of treatments for these lesions. This report describes an infant with a disseminated pyogenic granuloma 10 days post scalding. This case didn't go under surgical treatment. The lesions were treated by herbal medicine. After 8 months, no evidence of recurrence of lesions was seen.

Keywords: Pyogenic granuloma; Burns; Hemangioma; Herbal medicine

Abbreviations: PG: Pyogenic Granuloma; PH: Potential Hydrogen; PGB: Pyogenic Granuloma after Burn

Introduction

Pyogenic Granuloma (PG) is proliferation of capillaries and can be seen at the place with a minor trauma [1,2]. Almost one-third of lesions occur after trauma [3]. Although PG can be seen as a solitary vascular papule or nodule with smooth or warty surface, the multiple lesions have been reported [4]. The size of lesions varies from 5

mm to 2 cm and the color is different from bright red to brown-black as well as violet [2]. PG occurs on skin and mucous membranes of face, trunk and extremities [5,6]. Although, intravenous and subcutaneous variants have been reported [4]. This is a common condition in childhood but can appear in adult hood [5,7]. It has two classifications include proliferative and shriveling stages and has different outcomes. Also, Hyperkeratosis, multiple proliferative vascularization and presence of edema in stromata with inflammatory and plasma cells are important aspect of a histological examination [5]. Surgical method is a common option for PG treatment but

it is associated with the risk of scarring and pain [8]. This case was reported here, because it was treated by non-surgical way.

Case Report

A 15-month-baby girl with multiple lesions on the right posterior trunk was admitted to burn clinic of Imam Khomeini hospital in Kermanshah, West of Iran. First admission was the 25 days after a second degree burn by boiling water. Burn injury had been treated by local person who cure patients by herbal medicine, a plant of Snapdragon with scientific name of *Scrophularia striata*. This plant is used in western part of Iran as a traditional medicine [9]. Ten days after burn damage, papilomatous lesions developed. The first photo of lesions presented here in Figure 1.



Figure 1: Large disseminated pyogenic granuloma in proliferating phase on the right posterior trunk, 10 days after burn.

Then baby's parent took her to several dermatologists' offices but never completed the treatments, laboratory and pathologic tests. Her parents didn't believe to modern diagnostic and treatment methods. At the time of admission to burn clinic, 25 days after burn injury and 15 days after onset of skin lesions, baby was assessed by surgeon and went under oral and topical antibiotics. The size of multiple lesions at this period of time was between 0.4-2.8 mm. Photo at this time are presented below in Figure 2.



Figure 2: 15 Days after onset of disseminated pyogenic granuloma in shriveling stage.

The baby was treated out-patiently by oral antibiotic such as cephalexin syrup 250mg/ 4 times daily and topical ointments such as Fluocinolone and Gentamicin mix together daily. Also, parents received advices about daily change of dressing and future visit at clinic 4 days later. But they did not attended in the hospital again at that time. The necessity of follow up and risk of hemorrhage were explained for the parents by phone call and they were asked to refer to burn clinic again. Exactly, 32 days after burn injury they came to the hospital again. The prescribed medicine hadn't been used and baby has gone under local and herbal treatment again. The presented photo showed the skin lesions after 22 days of onset and after usage of medicine, 32 days after burn (Figure 3).



Figure 3: 22 Days after onset of disseminated pyogenic granuloma in shriveling stage, 32 days after burn injury.

In comparison of the lesions in 15th day with 22th day, they were smaller in size and height in day 22. The redness decreased. Baby was followed by telephone every 7-10 days for nearly 8 months. According to parent's reports all lesions are becoming smaller than before. Around 125 days after onset of PG, the size and height of lesions were decreased significantly without surgical treatment. But, there were still some flat brown patches and some healed lesions with 2 mm height that showed need to more follow ups. After 10 months, there was no evidence of recurrence of lesions (Figure 4).



Figure 4: 125 Days after onset of disseminated pyogenic granuloma, without surgical treatment.

According to parents' report the baby was under herbal treatment. The lesions were washed by a dark yellow solution with PH = 5 daily. Also the lesions were covered by hand-made oil by person who prescribed herbal medicine daily. Both of them maintained out of refrigerator during the course of treatment. The solution and oil name were not disclosed by manufacturer.

Discussion

Pyogenic granuloma, Lobular capillary hemangioma, was first introduced at 1897 [1,7]. The etiology of PG is not completely known but potential factors such as trauma, chronic irritation, trauma like activities (nose piercing, smallpox vaccination, retinoid therapy, increased level of female hormone, infection, growth factor, and microscopic arteriovenous anastomosis) are considered. Also burn injury, even healed, has been reported as a cause of PG [1,5]. The majority of cases had a second degree burn [5]. Pyogenic granuloma after burn (PGB) has different characteristics such as being present 1-4 weeks after burn in burn area and being infected by bacteria, fungi and viruses. Disseminated PG is a very rare case after burn injury. Milk was the main cause of burn in most cases [1]. Although history and clinical examination are

used for differential diagnosis of a pyogenic granuloma, it is reasonable to do histological confirmation [1,2]. No risk of malignancy threatens the patients but there are tendencies for easy traumatizing and copious bleeding [2,7]. Hemorrhage, ulceration and infection are complications that should be always considered. If the PG presents in face there is the risk of cosmetic disfiguration [7]. It is a recurrent condition with a rate more than % 40 [2,5]. Surgical shave excision with electro surgery of the base, electro cautery, CO₂ Laser, pulsed dye laser, topical silver nitrate, sclerotherapy and topical imiquimod are the main methods of treatment for these lesions [2,6,7]. But this case is a disseminated PG after scalding. Although there are different methods for management of pyogenic granuloma in this case none of them was used. The baby almost treated by herbal medicine.

In study two cases of PG after burn was treated by surgically excision [1,6]. Also, in [3] study, hyperplastic lesion of gingiva was removed surgically [3]. Findings show that treatment of PG includes surgical remove completely [10]. Present case showed more attention to non-invasive treatments. But more study about the role of herbal medicine in treatment of PG is necessary. As the last photo was taken 16 weeks after the occurrence of PG, long time follow up is necessary for assurance of complete treatment and recurrence.

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References

1. Drugun M, Selcuk CT, Ozalp B, Aydinol M, Alabalik U (2013) Multiple disseminated pyogenic granuloma after second degree scald burn: a rare two case. *Int J Burns Trauma* 3(2): 125-129.
2. Kane K, Lio P, Stratigos J, Johnson A (2009) *Color atlas and synopsis of pediatric dermatology*. (2nd edn), The McGraw-Hill Companies, New York, USA.
3. Verma PK, Srivastava R, Baranwal HC, Chaturvedi TP, Gautam A, et al. (2012) "Pyogenic Granuloma-Hyperplastic lesion of the gingiva: case reports". *Open Dent J* 6: 153-156.
4. Alialgaglu C, Bakan V, Atasoy M, Toker S (2006) Pyogenic granuloma with multiple and satellite

- involvement after a burn in a 5-year-old child. *J Dermatol* 33(2): 150-152.
5. Zhao H, Huang S, Fu X (2015) Should pyogenic granulomas following burns be excised? *Burns* 41(3): 431-436.
 6. Dastgheib L, Maghami Z, Aslani FS (2016) Infantile multiple large pyogenic granuloma on burned skin. Case report and review of literature. *An Bras Dermatol* 91(2): 212-214.
 7. Alexander Leung KC, Barankin B, Hon KL (2014) Pyogenic Granuloma. *Clinics in Mother and Child Health* 11: e106.
 8. Pozzo -Magana BD, Lara-Corrales I (2014) Topical Timolol for pyogenic granuloma in a child: A case report and literature review. *Adv Pediatr Res* 1: 5.
 9. Tanideh N, Haddadi MH, Rokni-Hosseini MH, Hossienzadeh M, Mehrabani D, et al. (2015) The healing effect of *scrophularia striata* on experimental burn wounds infected to *pseudomonas aeruginosa* in rat. *World J Plast Surg* 4(1): 16-22.
 10. Jafarzadeh H, Sanatkhan M, Mohtasham N (2006) Oral pyogenic granuloma: a review. *J Oral Sci* 48(4): 167-175.