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Case Series

Therapeutic vanish in pyogenic granuloma: a case series

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ABSTRACT

Pyogenic granuloma (PG) is a common benign vascular tumour which affect both skin and mucous membranes, occurring commonly on the face, oral mucosa, or a site of previous injury in all ages. Though some PGs resolve spontaneously, most requires treatment to prevent bleeding, ulceration, and scarring. We presented a case report of 4 patients who developed PG on index finger, forehead and nose. Our findings demonstrated the use of sclerotherapy using 3% sodium tetradecyl sulphate which is a safe and economical therapy for adult patients.

Keywords: Pyogenic granuloma, Sclerotherapy, Sodium tetradecyl sulphate

INTRODUCTION

Pyogenic granuloma (PG) also known as lobular capillary hemangioma - a common vascular hyperplasia of the skin and mucous membranes.[1] Pyogenic granulomas is recurrent, resistant/refractory for medical line of treatment and occur in patients of any age, they are more prevalent in children, adolescents, and pregnant women.[2] PG has been associated with minor trauma, chronic irritation, hormonal factors, and infections. Even though it was identified over a century ago, but no significant causative relationships have been reported till date.

Some PGs will resolve spontaneously but some may need treatment to prevent bleeding, ulceration, and scarring. Current treatment techniques include cryotherapy, laser, electrodessication, curettage or shave excision, sclerotherapy, corticosteroid injections, and imiquimod 5% cream either alone or in combination.[3] Unfortunately, majority of these treatment options have been associated with pain, scarring, or other side effects.[4] Surgery can leave an apparent scar, and treatment with a laser, which is inappropriate for a thicker lesion, requires specialized training and a staged procedure. Although these are reactive hyperplasia, they have a relatively high rate of recurrence after simple excision. This poses a challenge when dealing with pediatric patients or when treating on sensitive areas like the face. Therefore, sclerotherapy has evolved as an effective alternative approach when compared to surgical excisions.[5]

Sclerotherapy for pyogenic granuloma is a relatively simple, effective, and inexpensive method that is a valuable and a promising treatment.[5] The advantages of sclerotherapy are that it is a simple, safe, effective, and minimally invasive procedure, with minimal discomfort to the patient and minimal complications compared to surgery. There is negligible blood loss and no requirement for any postoperative dressing or specific care.[6] The most commonly used sclerosants are polidocanol, sodium tetradecyl sulfate, sodium morrhuate, sodium sylliate, pingyangmycin, OK-432, ethanolamine oleate, and ethanol. We report a case series of 4 patients who were diagnosed with PG indication and successfully treated with sclerotherapy using 0.1 ml of 3% sodium tetradecyl sulphate (STS).

CASE SERIES

Four patients were presented to out patient department of dermatology with asymptomatic lesion over different regions (Table 1). On examination, there was a

pedunculated mass protruding out. The surface was pink to purplish gray in color and had crusts and old blood clots indicating bleeding episodes.

Table 1: Clinical presentation of patients.

Patients	Age (in years)	Gender	Region of lesion
Patient 1	36	Male	Right hand index figure
Patient 2	26	Male	Left side of forehead
Patient 3	19	Female	Right hand index figure
Patient 4	40	Female	Right anterior nose

Figure 1: Lesions present over the palmar aspect of the right index finger.

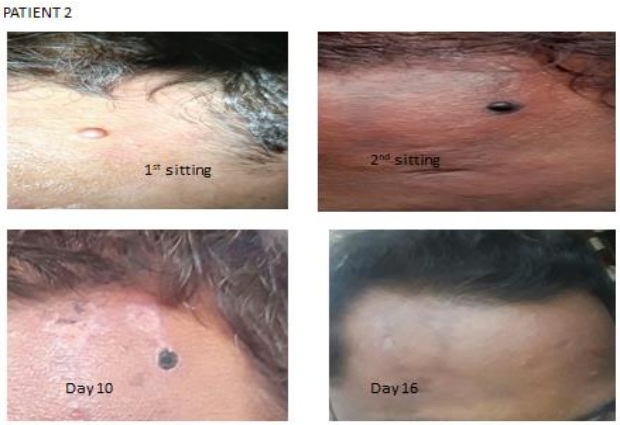

Figure 2: Lesion over left side of forehead.

After obtaining the consent, all patients were treated by intralesional sclerotherapy with 3% STS. A maximum of 0.1 ml of undiluted sclerosant was injected into the lesion with an insulin syringe till the point of blanching and the lesion was compressed for 1-2 minutes. There was no bleeding during the procedure, but one patient experienced mild pain. The results evaluated were classified into 3 criteria i.e. complete remission, partial remission, and no change. Recurrence and side effects were also evaluated.

Complete remission of PG was achieved in 2 patients after 1 session of sclerotherapy. Another patient showed complete remission after 2 sittings of sclerotherapy (one week apart) and the other patient showed no change even after 3 sessions of sclerotherapy. There were no recurrences observed in the three months of follow up. Clinically, side effects such as pain, local irritation, tenderness, hyperpigmentation, numbness, and scarring were noted but these were all mild and transient. Images of pre and post treatment at monthly intervals are shown in Figures 1 to 4.

Figure 3: Lesion present at the lateral border of the right index finger.

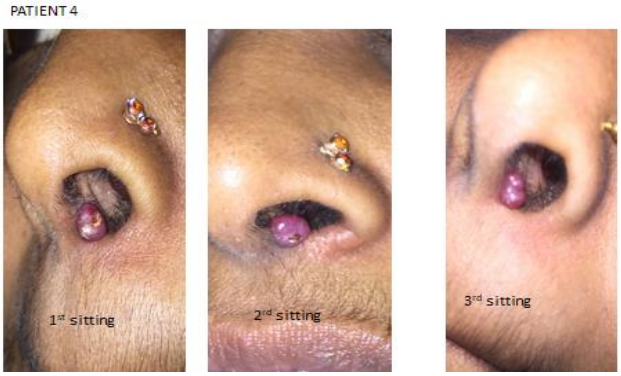

Figure 4: Lesion over the right anterior nose.

DISCUSSION

Injury of the connective tissue stimulates parenchymal and stromal cells to undergo desmoplastic changes.[7] Exuberant connective tissue injury is known to occasionally induce the indication called pyogenic granuloma (PG).[8] PG is asymptomatic and painless, but due to its highly vascularity it often easily bleeds.[8] The lesion will grow slowly but it may also grow more rapidly in some cases.[9] The pyogenic granuloma develops as firm erythematous, ulcerative, hemorrhagic bright red to purple red lobulated mass or friable polyploidy papule.[8,10] Color ranges from pinkish to reddish. This depends on the duration of the lesion since older lesions tend to become more collagenized and pink whereas younger ones are more vascular.

Deore et al reported a case in which they used the same agent sodium tetradecyl sulfate for sclerotherapy in pyogenic granuloma with successful resolution of the lesion.[11] Around 95% of clearance was achieved by Hong et al by using sclerotherapy treatment with ethanolamine oleate in reactive vascular lesions.[12] Sacchidanand et al used sodium tetradecyl sulfate in the same concentration as ours and treated three patients with pyogenic granuloma and achieved 100% clearance.[13] In another study by Moon et al treated 15 patients using the same sclerosing agent in which 14 out 12 patients showed complete resolution.[14]

Rahman et al reported a case of PG in which same sclerosant was used with same concentration and found 100% clearance.[15] In another study conducted by Kiran et al also used sclerotherapy treatment in which patients were injected with 0.1 ml of 3% sodium tetradecyl sulfate. Complete clearance of lesion was found in 30 (85.7%) patients whereas 2 (5.7%) patients showed no reduction.[16] Our study findings were also in consistent with this study in which 3 out of 4 showed complete clearance and in one patient reduction was not seen. All these results clearly demonstrated that sclerotherapy can be an effective technique that are not used frequently in this indication.

CONCLUSION

Sclerotherapy is an effective treatment in case of pyogenic granuloma. A complete resolution of the lesion can be achieved with minimal side effects. Our case report supports the use of 0.1 ml 3% sodium tetradecyl sulfate as a safe and cost-effective adjunctive option for PG therapy in both pediatric and adult populations. More multi-centric studies with larger sample size are needed to provide additional evidence that supports this treatment.

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