

## A Case Report of Recurrent Pyogenic Granuloma with Satellitosis

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### ABSTRACT

Recurrent pyogenic granuloma with satellitosis is an uncommon condition with majority of cases resolving within one year after treatment. We report a case of recurrent pyogenic granuloma in a middle aged man who kept on relapsing at different point of time despite treatment with electrocoagulation, cryosurgery and oral methotrexate. The case highlights the unusual presentation of relatively common condition of pyogenic granuloma.

**Keywords:** *Electrocoagulation, pyogenic granuloma, satellitosis*

### INTRODUCTION

Recurrent pyogenic granuloma with satellitosis is an uncommon condition seen in clinical practice with 50 cases described so far.<sup>1</sup> We report an interesting case of recurrent pyogenic granuloma in middle age man well controlled with multiple sessions and intermittent treatment with electrocautery, cryosurgery, and oral methotrexate with less frequency of relapses at last follow up after a period of 7 years.

### CASE PRESENTATION

A 50-year-old gentleman presented with the history of multiple painless nodules over the left scapular region for seven years. The lesions erupted insidiously seven years back as a small itchy papule which gradually increased in number and progressed to pea sized vascular nodules over a period of few weeks (Figure 1). The larger nodules were associated with profuse bleeding on trauma. He had no history of symptoms suggestive of systemic diseases. These nodules were diagnosed as pyogenic granuloma with satellitosis and were treated with electrocoagulation. The lesions used to recur after few weeks of treatment. Because of recurrent nature, excision biopsy of lesion was done 7 years back which

showed polypoid lesion with proliferation of thick walled capillary vessels with epithelioid endothelia without mitotic activity (Figure 2). The nodular proliferations of capillaries were embedded in a fibrotic tissue and an inflammatory infiltrate consisting of small lymphocytes and numerous eosinophils (Figure 3). Human Herpesvirus-8 (HHV-8) immunohistochemistry was negative. Nested PCR showed no DNA of Bartonella. The histopathological features were suggestive of



Figure 1. Multiple vascular papules and nodules with scars in left scapular region

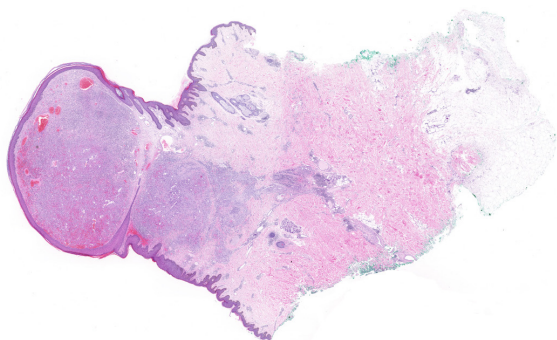


Figure 2. Polypoid tumour at top (X40, H and E)

polypoid capillary hemangioma with inflammation.

Since then, the patient has been on multiple modalities of treatment including electrocoagulation of larger lesions, liquid nitrogen cryosurgery of smaller lesions and intermittent intralesional injection of triamcinolone acetonide for hypertrophic scars. The patient was also put on low dose of methotrexate (5-7.5mg every week) for a period of 8 months. Even with these multiple treatment the eruption of these polypoid nodules continued. However, the time for numbers of lesions to erupt increased with these treatment modalities. Methotrexate was stopped 5 years back as it apparently did not improve the lesions. The treatment with electrocoagulation and liquid nitrogen continued at an interval of approximately one and half months as the new lesions erupt.

On examination of lesions three months back (7 years after the diagnosis), there were multiple erythematous to bluish papules and nodules over the left scapular region (Figure 3). Few of the nodules showed minimal necrosis on the surface with the scab. They were painless, firm and non-compressible. There were multiple scars interspersed in between these lesions.

The lesions were electrocoagulated and the patient was once again started on methotrexate 7.5 mg every week. On subsequent follow up at 3 months, the patient reported to be free from the lesions.

## DISCUSSION

Pyogenic granuloma are common benign vascular growth which can present in both skin and mucosa and diagnosed in 0.5% of nodular growth in paediatric population.<sup>2</sup>

Recurrences after treatment are well defined in literature, however, recurrences with satellitosis especially in middle aged man are not defined so far. There were two reports of pyogenic granuloma in Indian adults<sup>3</sup>, however, the sites of involvement were scalp and cheek, different

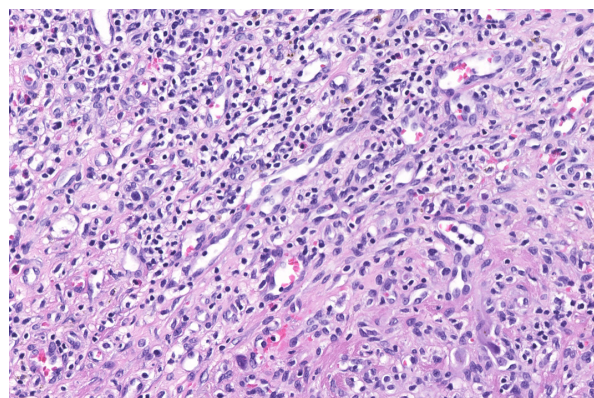


Figure 3. Proliferating vascular channels with lymphocytic and eosinophilic inflammatory infiltrate (X200, H and E)

from our case. Most of the reports of recurrence was interscapular region.<sup>4</sup> Maximum duration of disease described so far has been one year for these cases.<sup>4</sup> Our case is unusual because the course of disease was more than 7 years. Most of the cases have been reported to respond to treatment with electrocautery and other forms of destructive surgeries.<sup>5</sup> As our patient did relapsed frequently despite usual forms of treatment, the patient had to be managed at different point of time with combination of electrosurgery, cryosurgery and was put on intermittent therapy with methotrexate.

The exact pathogenesis of multiple and satellite pyogenic granuloma is unknown. Many authors have proposed different theories on its pathogenesis one of which attributes Bartonella as one of the cause which was not seen in our case proved by absence of its DNA.<sup>6</sup> A gene that codes for protein B-raf (BRAF) and RAS mutations are detected in pyogenic granulomas, however, their roles in recurrence are unknown.<sup>7</sup> In our case, trauma especially after destructive surgery like electrocautery or while sleeping could be responsible for release of endogenous substances including angiogenic factors which could be responsible for recurrent multiple lesions.

## CONCLUSION

Recurrent pyogenic granuloma with satellitosis is a rare presentation in dermatological out patient department which needs multiple modalities of treatment. Despite treatment, the lesions might recur for long period of time. Treatment which can be considered includes electrosurgery, cryosurgery, intralesional steroids and methotrexate.

## CONFLICT OF INTEREST

None declared.

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