

## Case Report

# Successful treatment of granuloma faciale

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### ABSTRACT

Granuloma faciale (GF) is a chronic condition characterized by asymptomatic erythematous plaque with prominent telangiectasia presenting usually over the face. Although the condition is benign, its treatment is often unsatisfactory. Therapeutic modalities that have been tried include topical steroids and topical tacrolimus sometimes enhanced with topical dapsone. Others include intralesional corticosteroids, antimalarials, isoniazid and pulsed-dye laser. We report a case of a 58 years old female with a 1 year history of a solitary slowly progressive plaque over the nose. Diagnosis of GF was made based on the histopathological findings. The patient was started on the combination of topical tacrolimus, intralesional corticosteroids injection and oral doxycycline for 3 months. The patient showed gradual improvement in 3 months without any side effects. This case supports previous papers of successful treatment of GF with topical tacrolimus. There was no recurrence at follow-up 18 months later. It also supports the use of combination therapy especially in resistant cases.

**Keywords:** Granuloma faciale, Tacrolimus, Doxycycline, Intralesional corticosteroids

### INTRODUCTION

Granuloma faciale (GF) is an uncommon idiopathic, benign, chronic inflammatory dermatosis, characterized by asymptomatic solitary or multiple brown-red to violaceous papules, nodules, or plaques appearing predominantly on the face.<sup>1-3</sup> However, atypical cases with extra-facial involvement have been reported.<sup>4</sup> It affects sun exposed sites as the nose, forehead, and cheeks. Sunlight exposure is considered a triggering factor for granuloma faciale, but other triggering factors are unknown.<sup>5,6</sup> GF commonly affects middle aged Caucasian men.<sup>1,7,8</sup> These cutaneous lesions tend to persist despite its benign nature. Various treatment options are available both medical and surgical, but it remains therapeutically resistant. It also tends to recur even with effective treatment.<sup>1,8</sup>

### CASE REPORT

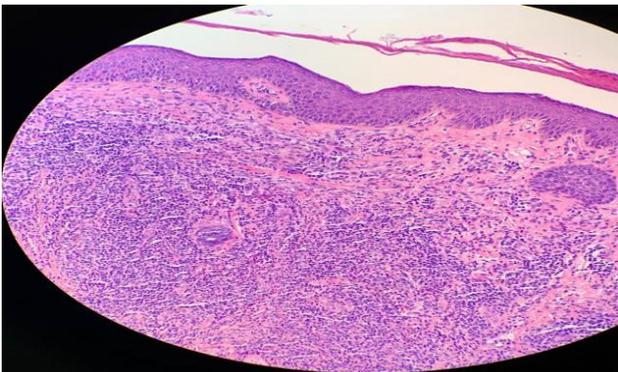
In this report, we describe a case of GF that was diagnosed based on history and clinical examination, as well as the histopathological findings. A 58 years old female patient presented to our dermatology department with a 1-year history of asymptomatic lesion over the nose. The lesion was slowly progressive over 6 months. There was no other significant complaints except for aggravation from sunlight.

General physical and systemic examination were normal. Cutaneous examination revealed a solitary, 1×2 cm in size, erythematous, non-tender and infiltrated plaque over the dorsum of the nose (Figure 1). Overlying surface showed prominent telangiectasia and follicular openings.

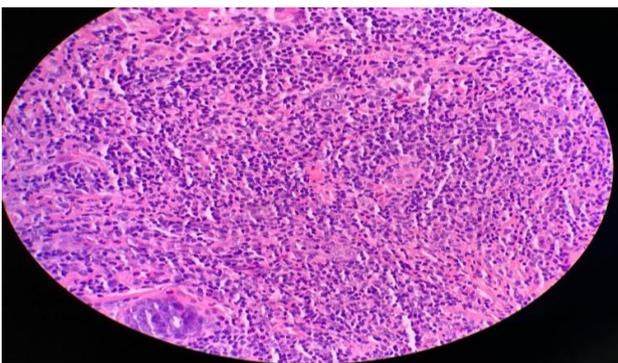
Routine hematological and biochemical investigations were normal. A biopsy specimen revealed dense dermal inflammation with grenz zone (Figure 2). The infiltrate was composed of lymphocytes, eosinophils, histiocytes and plasma cells (Figure 3).



**Figure 1: Erythematous infiltrated plaque over the dorsum of the nose.**



**Figure 2: Dense dermal infiltrate with grenz zone.**



**Figure 3: Mixed inflammatory infiltrate composed of lymphocytes, eosinophils and histiocytes.**

The patient was started on combination therapy of topical tacrolimus 0.1% ointment twice daily for 3 months, intralesional triamcinolone acetonide injection every 3 weeks with a total of 4 sessions and doxycycline 100 mg once daily for 3 months. Our patient showed gradual improvement followed by clearance of the lesion after 3

months of therapy (Figure 4). No side effects of the treatment were reported. There was no recurrence at follow-up 18 months later.



**Figure 4: After therapy, only slightly coloured patch of the lesion remain.**

## DISCUSSION

GF is an uncommon chronic inflammatory dermatosis. It is characterized by solitary or multiple well circumscribed, infiltrated reddish-brown to purple, nodules or plaques that range from several millimetres to several centimetres in diameter.<sup>1</sup> The surface of granuloma faciale is distinguished by the presence of telangiectasia and follicular accentuation. The majority of lesions are usually confined to sun exposed skin especially the face.<sup>2</sup> Sites of predilection include the sides and helix of the ear (34%) tip of the nose and cheeks (29%), the per-auricular area (22%) and forehead (15%).<sup>9</sup> However, few cases described the involvement of extrafacial sites. In these cases, the locations of extrafacial lesions were more commonly on the trunk and proximal extremities.<sup>4</sup>

The diagnosis of GF is made based upon the correlation of its characteristic clinical appearance and histological evaluation of the lesion. The classical histological findings include dense inflammatory infiltrate with a predominance of eosinophils and neutrophil in the dermis, a narrow grenz zone that separates the inflammatory infiltrate in the dermis from the overlying epidermis and a deposition of fibrin around blood vessels which is confirmatory of vasculitis.<sup>4</sup>

Erythema elevatum diutinum (EED) is considered one of the main differential diagnosis of GF, especially in its extrafacial presentation. Both disorders are leukocytoclastic vasculitis variants. The main differences between them are clinical. EED occurs with lesions on the extensor surface of the joints while GF lesions manifest predominantly on the face. Histopathological findings show overlapping features between the two entities. EED is characterized by major fibrosis component while GF has more inflammatory infiltrate with characteristic uninvolved Grenz zone. However, the changes between these two entities usually present in a very similar way, not being adequate for differentiation.<sup>10</sup>

GF is often resistant to treatment and tend to relapse once treatment is discontinued. Several medical and surgical treatment strategies have been used for GF. The literature reports multiple cases of GF treated by topical calcineurin inhibitors such as tacrolimus and pimecrolimus. Dourmishev et al reported a case of multiple GF that initially failed systemic treatment with chloroquine and topical betamethasone, but switching to topical pimecrolimus showed visual improvement.<sup>1</sup> Furthermore, Gupta et al described a case of GF with multiple extrafacial involvement and its response to topical tacrolimus.<sup>1</sup> The reports of successful treatment of GF with tacrolimus is consistent with our findings. Other papers described the use of multiple treatment modalities. Chunyu et al described a case of GF successfully treated with oral prednisone, tranilast and thalidomide.<sup>8</sup> Also, Micallef et al described complete clearance of resistant GF with pulsed dye laser after pretreatment of topical mometasone and tacrolimus.<sup>9</sup> Other possible therapies were suggested in the literature such as intralesional corticosteroids, antimalarials, dapson, cryosurgery, surgical excision and pulsed-dye laser with variable success rates.<sup>1</sup>

## CONCLUSION

Finally, this paper supports other papers that topical tacrolimus is an effective and safe treatment for GF. It also supports the use of combination therapy especially in resistant cases. One such combination would be the application of topical tacrolimus, intralesional corticosteroids and oral doxycycline.

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