

Introduction

Granulomatous rosacea (GR) belongs to the rosacea spectrum and can be challenging to diagnose in the landscape of conditions presenting as granulomatous facial eruptions. This rare inflammatory skin disease is most common with middle-aged women and people with lighter skin types.(1) GR is not considered as a subtype, but as a variant of rosacea characterized by clinical and histological findings of granulomas.(2) Other signs of rosacea such as telangiectasia, erythema or flushing can be present, but are not obligatory for diagnosis. Generally, GR is not associated with extracutaneous manifestations.(2) The clinical presentation of GR can vary greatly, yet it is mainly characterized by discrete monomorphic papules which can be yellow, red, brown or skin-colored and are primarily found on the facial convexities.(2) The pathogenesis as well as the treatment of this disease remain controversial.(3)

Case report

A 53-year-old woman presented with a 21-month long history of a **non-pruritic, erythematous plaque involving the glabellar area**.

- History: no systemic symptoms, no medication, no personal/family history
- Clinical examination: solitary, slightly scaly, indurated and erythematous plaque in the glabellar region
- Previous treatments (no or minor effect): lymecycline 300mg twice daily, topical clindamycin, topical tretinoin, topical steroids
- Punch biopsies: perifollicular granulomatous dermatitis with non-necrotizing, well defined granulomas surrounded by moderate lymphohistiocytic infiltration.
- Diagnostic work-up: regular bloodwork, chest X-ray, HRCT and ophtalomological examination: normal

Work diagnosis: granulomatous rosacea
R/ Doxycycline 50mg twice daily

Effect: follow-up after 2 months showed improvement of the facial eruption. After 4 months of treatment: more improvement, less induration and erythema



Fig. 1. The patient before, after two months and after four months of treatment with oral doxycycline. Pictures are published after patient's approval.

Discussion

GR can mimic various granulomatous diseases. Therefore, the differential diagnosis should include perioral dermatitis (PD), Lupus Miliaria Disseminatus Faciei (LMDF), cutaneous sarcoidosis and tuberculosis, as listed in Table 1. In the differential diagnosis it can be difficult to distinguish GR from sarcoidosis, as their histopathological findings resemble one another.(1) In our case, no additional manifestations of sarcoidosis, e.g. pulmonary or ophthalmological signs, could be detected and multiple treatments with topical corticosteroids had little to no improvement. Furthermore, there are no large studies that prove the effect of tetracyclines such as doxycycline for sarcoidosis.(4) The diminution of the facial plaque under empirical treatment with doxycycline in combination with its clinicohistopathological image is in favor of GR as diagnosis.

Take home messages

- GR has a variable clinical presentation
- Diagnosis of GR is difficult, other granulomatous eruptions need to be excluded
- No standard treatment of GR is available
- Treatment with doxycycline 50mg 2dd has proven to be effective in this case

	Patiënt description	Clinical characteristics	Histopathology
Granulomatous Rosacea (GR)	Middle-aged females (2)	Periorificial brown, yellow, red or skin-colored papules, possibly accompanied by erythema (2)	Non-necrotizing epithelioid granulomas with a mixed lymphohistiocytic infiltrate (5)
Cutaneous sarcoidosis	All ages	Papules, nodules, plaques and infiltrated scars as most common presentations (6)	Naked, non-necrotizing epithelioid cell granulomas with few or no peripheral inflammatory cells (7)
Perioral Dermatitis (PD)	Children and women aged 20-45 years (3)	Periorificial, clustered and erythematous papules, papulovesicles or -pustels with possible confluent aspect (2)	Granulomatous lesions show perifollicular non-necrotizing granulomas admixed with lymphocytes (3)
Lupus Miliaria Disseminatus Faciei (LMDF)	Adolescents and adults	Inflammatory erythematous or skin-colored papules distributed symmetrically across eyelids, nose, upper lip and occasionally on the extremities/trunk (8)	Perifollicular casting granulomas with dense lymphocytic infiltrate and prominent fibrosis in older lesions (8)
Cutaneous tuberculosis	All ages	Variable: inflammatory papules, verrucous plaques, chronic ulcers or other lesions with often systemic symptoms (3)	Necrotizing granulomas surrounded by numerous lymphocytes (3)

Table 1. Differential diagnosis of granulomatous dermatitis on the face

References

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