

Granulomatous rosacea: case report – a therapeutic focus*

*Rosácea granulomatosa: relato de caso – enfoque terapêutico**

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Abstract: The authors describe a case of granulomatous rosacea in a 39-year-old male, successfully treated with oral lymecycline and topical gel of metronidazole. Granulomatous rosacea is a rare form of classic rosacea, characterized by brownish-red papules or small nodules on a diffusely reddened background and thickened skin. Lesions generally appear on the lateral surfaces of the face and on the neck. Histopathological examination shows perifollicular and perivascular granulomas. The course is chronic and treatment involves oral antibiotics, such as tetracycline and derivatives; and topicals, such as metronidazole and topical retinoids.
Keywords: Lymecycline; Metronidazole; Rosacea; Rosacea/therapy

Resumo: Os autores descrevem um caso de rosácea granulomatosa em um homem de 39 anos de idade, tratado com a associação de limeciclina oral e metronidazol gel tópico. A rosácea granulomatosa é uma variante da rosácea clássica, rara, caracterizada pela presença de pápulas vermelho-acastanhadas ou pequenos nódulos com base eritematosa e infiltrada, surgindo geralmente na superfície lateral da face e no pescoço. O exame histopatológico evidencia granulomas perifoliculares e perivascularares. A evolução é crônica, e o tratamento inclui antibióticos orais, como a tetraciclina e seus derivados, e medicações tópicas, como metronidazol, ácido retinóico, entre outras.

Palavras-chave: Limeciclina; Metronidazol; Rosácea; Rosácea/terapia

INTRODUCTION

Rosacea (from Latin: rose-like) is a relatively common chronic skin disorder, which affects predominantly the central facial area, especially malar, nasal, frontal regions and mentum.¹ It is characterized by recurrent episodes of edema and facial redness, complicated by the presence of papules, pustules, teleangiectasias and tissue fibrosis.² It is more usually observed in women between 30 and 50 years of age,

and is uncommon during adolescence and advanced ages.

Granulomatous rosacea, considered as a special form of rosacea, is a rare condition, described for the first time in 1970 by Mullanax and Kierland, characterized by reddish papules or small nodules, on a thickened erythematous base, frequently affecting

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Conflict of interest: None

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lower eyelids.³

In this article, we report the case of a granulomatous rosacea in a 39-year-old male, treated with oral lincycline and topical metronidazole.

CASE REPORT

Yellow-skinned 39-year-old male patient, salesman, Born in and coming from the interior of the state of Rio Grande do Norte, who had had a reddish plaque in the right temporal region, with progressive growth, for two years. He reported to have used topical steroids, with no improvements. Upon examination, he presented a well-delimited erythematous plaque with areas of desquamation and atrophic spots, measuring approximately 10cm in the largest diameter, and located in the right temporal region (Figures 1 and 2).

Histopathological examination revealed epidermis with dilated infundibulum (Figure 3) and dermis showing dense inflammatory infiltrate with epithelioid granulomas surrounded by lymphocytes, around hair follicles (Figure 4), a result compatible with granulomatous rosacea. Therapy was begun with oral lincycline 300mg/day associated to metronidazole gel 0.5% for 30 days. After finishing this schedule, topical metronidazole was maintained for further 30 days, with total regression of the condition, and no relapse until the past three months (Figures 5 and 6).

DISCUSSION

Granulomatous rosacea, also called lupoid rosacea, was originally described in 1971 by



FIGURE 1: Erythematous plaque with scales and atrophic spots



FIGURE 2: Detail of the lesion, displaying well-delimited borders

Lewandowsky as tuberculoid.⁴ In 1949, Snapp concluded that Lewandowsky's disease had no relation to tuberculosis, neither a strongly reactive Mantoux's test.⁵ In 1958, van Ketel reported a group of patients with a typical clinical picture of rosacea, moreover presenting granulomas upon histopathological examination. Nevertheless, only in 1970 did Mullanax and Kierland call attention for a distinct form of rosacea that was characterized by epithelioid granulomas.³

Granulomatous rosacea is a variant of popular rosacea with a chronic and non-relapsing course,⁶ which presents with brownish-red papules on an infiltrated erythematous base, features which alone are enough for diagnosis of the disease.⁷ Clinically, it may be differentiated from classic rosacea by lesion location, which generally occur on the lateral surface

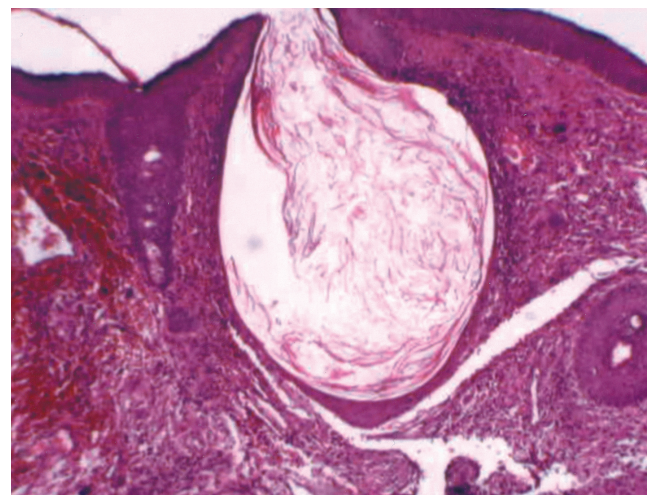


FIGURE 3: Epidermis with dilated infundibulum. Dermis showing dense inflammatory infiltrate (HE x 200)

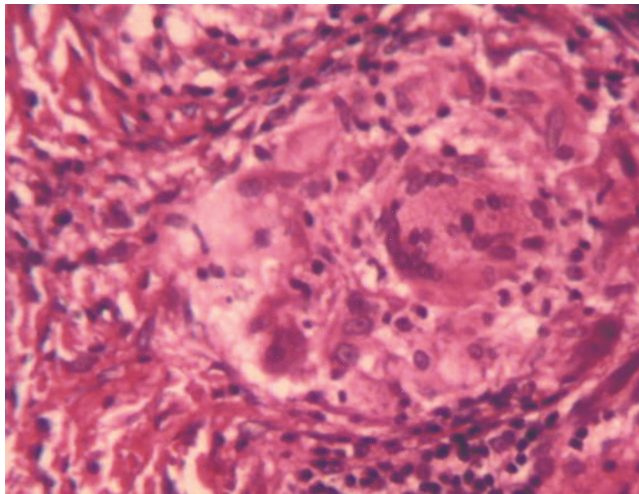


FIGURE 4: Dermis with epithelioid granuloma surrounded by lymphocytes (HE x 400)

of the face and in the neck below the mandible,⁵ and histopathologically by the presence of epithelioid granulomas, both findings present in the present case.

Rosacea emerges from the interaction between individual genetic predisposition, detected by means of cutaneous phototype and increased reactional capacity of skin vessels, and the presence of triggering environmental factors.⁸ described as provoking factors are chronic exposure to sun, emotional alterations, exposure to abrupt climate changes, exposure to food in high temperatures, use of alcoholic beverages, use of vasodilator drugs, use of photosensitizing substances and/or clinical photosensitizing conditions. Also mentioned are clinical situations in of flushing-inducing substances, physiologic hormone alterations of the climaterium and infectious processes (*H. pylori*), gastrointestinal disorders and hormonal dysfunctions that induce the action of cytokines other

mediators (neuropeptides, such as Substance P).⁸

The possible involvement of *Helicobacter pylori* in the etiopathogenesis of this dermatosis is suggested by the frequent association between rosacea and gastrointestinal tract disorders, besides the fact that this bacterium induces secretion of gastrine and pentagastrine, which may trigger flushing (an important clinical sign of rosacea), and release of potent inflammation mediators.⁹

Local infection by *Demodex folliculorum* has been associated to the disease. Grosshans described the possibility that granulomas represent a delayed-type hypersensitivity reaction to the agent. However, some authors question the etiopathogenic role of *D. folliculorum* in granulomatous rosacea.⁴

Treatment includes the use of oral antibiotics, such as tetracycline and its derivates, and clarithromycin, and topical medications, such as metronidazole, retinoic acid and azelaic acid, besides orientations for exclusion of likely provoking factors. Granulomatous rosacea classically responds well to systemic administration of tetracycline.¹⁰ Nevertheless, tendency to relapse or recur may persist for several years. Even though some individuals may need prolonged systemic antibiotic therapy to treat relapses, others evolve satisfactorily by avoiding triggering factors and using topical medications, such as metronidazole gel.²

Tetracycline would act more as an anti-inflammatory than as an antibiotic, by reducing leukocyte migration and phagocytosis.¹¹ Its therapeutic efficacy for rosacea was first identified by Sneddon, who observed 80% of good results with use of tetracycline 250mg twice a day.¹² Lymecycline, a tetracycline derivate, was used in the present case due to proven efficacy of tetracycline for the treatment of rosacea, as well as for being the drug that presents the least side effects.



FIGURE 5: Control of lesion after 45 days of treatment



FIGURE 6: Control of lesion after 75 days of treatment

Metronidazole gel, an imidazole classified as an anti-protozoan and antibacterial agent, has been used with success in mild to moderate rosacea,² although its exact mechanism of action is not known.¹³ Dahl et al.² showed in a randomized double-blind study that in most studied individuals (77%), continuous treatment only with metronidazole gel maintained remis-

sion of moderate to severe rosacea, which had initially been treated with oral tetracycline and topical metronidazole gel. Based on this study, the authors conducted the treatment of the present patient with an association of oral antibiotic, lymecycline, and topical metronidazole, until obtaining a satisfactory result, and then maintained isolated use of metronidazole gel, with resolution up to the moment. □

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