

Treating papular nodular lesions of rosacea with a medium chemical peel

Peeling químico médio em lesões papulonodulares de rosácea

ABSTRACT

Rosacea is a prevalent chronic cutaneous disorder that often presents relapsing course and is challenging to treat. It is frequently necessary to use off-label treatments to achieve satisfactory results. We report the use of a single session of medium depth peel with Jessner's solution and 35% trichloroacetic acid in fifteen patients, which achieved good clinical outcomes and histopathological improvement. The use of medium-depth peels must, therefore, be considered a therapeutic option for the treatment of rosacea.

Keywords: rosacea; chemexfoliation; trichloroacetic acid; resorcinols; salicylic acid.

RESUMO

A rosácea é doença cutânea prevalente, de curso crônico e recidivante. Seu tratamento é, muitas vezes, desafiador. Com frequência, é necessário lançar mão de tratamentos não padronizados para conseguir resultados satisfatórios. Relata-se, em 15 pacientes, o uso de peeling médio com solução de Jessner seguido de ácido tricloroacético a 35%, em sessão única, alcançando bom resultado clínico, acompanhado de melhora histopatológica. O uso do peeling médio deve, portanto, ser considerado no arsenal terapêutico para o tratamento da rosácea.

Palavras-chave: rosácea; abrasão química; ácido tricloroacético; resorcinóis; ácido salicílico.

INTRODUCTION

Rosacea is a prevalent and polymorphous disorder that occurs more commonly in women. With varied clinical manifestations and chronic development, marked by remissions and recurrences, its incidence is underestimated.¹ The etiopathogenesis of rosacea is uncertain. Genetic, environmental, vascular, and inflammatory factors in addition to microorganisms such as *Demodex folliculorum* and *Helicobacter pylori* have been implicated.²

Rosacea affects primarily the center of the face (cheeks, nose, chin, and middle forehead). The erythematotelangiectatic form (subtype 1 rosacea) is the most common, followed by the papulopustular form (subtype 2 rosacea). The latter is characterized by persistent erythema and papules or pustules in the central area of the face.² In subtype 2 rosacea, besides topical therapy, it is usually necessary to administer systemic treatment. This combination, however, is often insufficient to provide satisfactory improvement for the patient.

Granulomatous rosacea, also known as lupoid rosacea, is a less common variant which is characterized by the presence of red-brownish papules or small nodules with erythematous and infiltrated bases, usually occurring on the lateral surface of the face and on the neck.³

The papulopustular subtype of rosacea is considered the easiest to treat.⁴ Many patients respond well to topical

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medications, however, in moderate to serious cases, a systemic therapy (mainly doxycycline) or combined treatment are sometimes necessary. There are only three Food and Drug Administration (FDA) approved topical medications for the treatment of rosacea: 0.75% and 1.0% metronidazole, 10% sodium sulfacetamide + 5% sulfur, and 15% azelaic acid.⁵ On the other hand, there are numerous off-label treatments used for rosacea, which include chemical peels. Off-label treatments are often used when trying to obtain a better response in patients who are refractory to standard treatment.

In one of the few studies published in the scientific literature regarding the use of chemical peels in the treatment of rosacea, Auada Souto and Velho⁶ described three patients with erythematotelangiectatic and papulopustular rosacea who were treated with 10–20% trichloroacetic acid (TCA). All patients showed improvement with reduction in cutaneous erythema and papulopustular lesions. Such an improvement can be attributed to the action of TCA, which produces an intense inflammatory response accompanied by the deposition of

collagen and the metabolism of fibroblasts and keratinocytes, and which acts as an antioxidant agent in solar elastosis.

METHODS

Fifteen female patients with papular-nodular lesions and refractory to the usual treatment for rosacea underwent a single session of medium depth peel with the application of Jessner's solution followed by 35% TCA. Postoperatively and at follow-up, specific medications were not used for rosacea.

DISCUSSION

All patients who underwent a session of medium depth peel showed an improvement in papular-nodular lesions. However, no satisfactory response was obtained in the reduction of erythema and facial telangiectasias. The results obtained in two patients (A and B) are shown in Figures 1–4. The accentuated improvement in papular-nodular lesions is shown in Figures 1, 2, and 3. Histopathologically, patient A, suffering from granulomatous rosacea, showed a great reduction in



Figure 1 - Patient A, granulomatous rosacea with 14-year-long development, unresponsive to standard treatment. Left: pre-peel. Right: after one session of medium depth peel with Jessner's solution followed by 35% trichloroacetic acid (TCA). A noticeable improvement in papular-nodular lesions can be observed



Figure 2 - Patient A: profile, pre- and post-peel

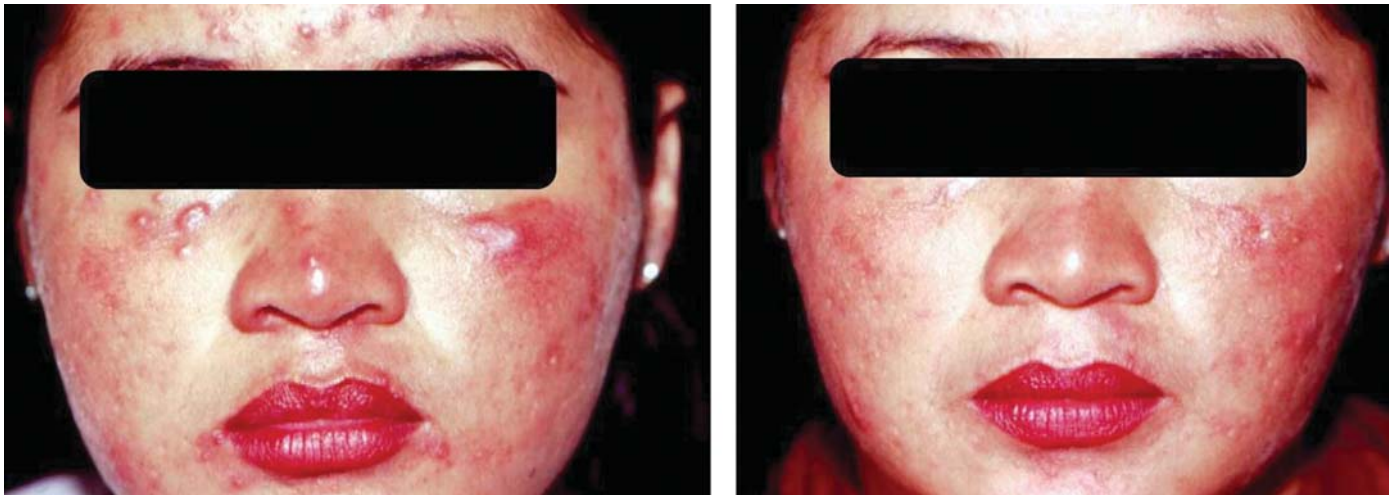


Figure 3 - Patient B: good results after one session of Jessner's solution followed by 35% trichloroacetic acid (TCA), showing improvement of papular-nodular lesions (without improvement in telangiectasias)

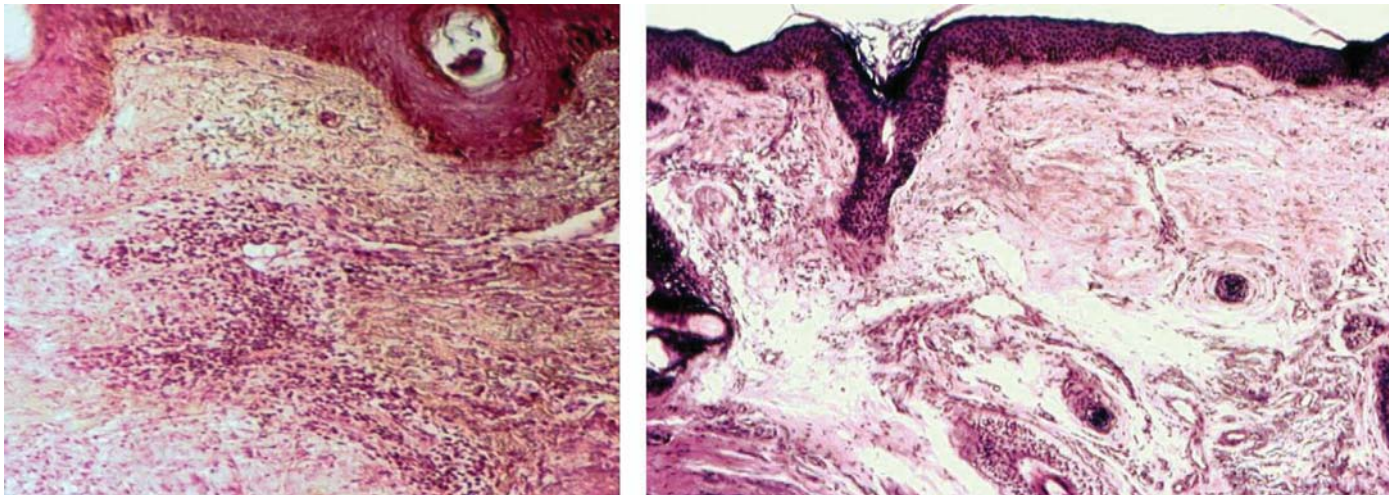


Figure 4 - Patient A: histopathology using HE staining. Left: pre-peel, using x 10 objective lens. Right: post-peel, using x 4 objective lens. The clinical improvement was accompanied by histopathological improvement, with reduction of the inflammatory infiltrate

inflammatory infiltrate (see Figure 4).

The mechanism through which medium depth chemical peels could promote an improvement in the papular-nodular lesions of rosacea is not yet well established. It is known that the peel produces an intense inflammatory response, with angiogenesis and fibrosis. Such neovascularization means that the peel is not recommended for the treatment of the erythematotelangiectatic subtype of rosacea, as it may result in the exacerbation of the clinical picture.

In the 15 patients treated with a medium depth chemical peel, the improvement was long lasting. Patient A did not experience the emergence of new papular-nodular lesions for 17 years, even without specific treatment for rosacea. Patient B

remained free from lesions for 4 months. However, late follow-up did not take place.

CONCLUSIONS

There are a variety of topical and systemic therapeutic options for the treatment of rosacea, especially for the papulopustular subtype.⁵ Treatments provide only a control of its manifestation and symptoms,⁶ with maintenance or repeat treatment often being necessary. Although they do not constitute a standard treatment, medium depth chemical peels are a good option when treating rosacea's papular-nodular lesions, and can provide fast and longlasting results. ●

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