

Treatment of Fordyce granules with a CO₂ laser: report of two cases

Tratamento dos grânulos de Fordyce com laser de CO₂ – Relato de dois casos

ABSTRACT

Fordyce granules are referred to as benign ectopic sebaceous glands characterized by multiple yellow papules, occurring mainly in the lower lip. It is mainly observed in adult men. The present study describes two cases of patients with Fordyce granules who were treated using a CO₂ laser and obtained good cosmetic results.

Keywords: *mouth mucosa; laser therapy; carbon dioxide.*

RESUMO

Os grânulos de Fordyce são referidos como glândulas sebáceas ectópicas benignas caracterizadas por múltiplas pápulas amareladas, principalmente em lábio superior e observadas na maioria dos casos em homens adultos. Descrevem-se dois casos de pacientes com grânulos de Fordyce que foram submetidos ao tratamento com laser de CO₂ obtendo bom resultado cosmético.

Palavras-chave: mucosa bucal; terapia a laser; dióxido de carbono.

INTRODUCTION

Fordyce granules are asymptomatic sebaceous glands commonly found in the oral mucosa, upper lip, and retromolar region.¹ They are characterized by multiple whitish or yellowish papules of 0.1 to 1 mm in diameter that may occasionally coalesce and form plaques,¹ though they are normally symmetrical in distribution. Mansur et al. described a case of unilateral location in the jugal mucosa associated with ipsilateral facial paralysis.² Only the sebaceous glands that are visible through the epithelium should be considered Fordyce granules.³ Their frequency increases with age, especially after hormonal stimulation during puberty, even though they are histologically present in children.³ Prevalence in adults ranges from 70–85%, with a slight predominance in men,² a fact also mentioned by Guleç et al.,⁴ in a study of lesions in the oral mucosa of kidney transplanted patients.

Histopathologically, the lesions are indistinguishable

Case Reports

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from sebaceous glands, nevertheless they are not associated with hair follicles, and their duct opens directly into the skin surface.⁵

They are clinically easy to diagnose, and complementary exams are not generally required. The picture must be differentiated from other oral cavity lesions such as candidiasis, tiny lipomas, Koplik spots, viral warts, Cowden syndrome's papular mucous lesions, lichen planus and leucoplasia.⁶

Despite Fordyce granules' asymptomatic nature and the fact that they may be considered a variation of the normal, some patients seek treatment for aesthetic reasons. There are case reports describing the use of bichloroacetic acid, CO₂ laser, photodynamic therapy with 5-aminolevulinic acid, oral isotretinoin and curettage with electrocoagulation.^{1,7-10}

CASE REPORTS

Patient 1: A thirty-five-year-old man with multiple yellow, asymptomatic papules since adolescence, located bilaterally on the upper lip, typical of Fordyce granules (Figure 1).

Patient 2: A thirty-two-year-old man with multiple papules in the upper lip, suggestive of Fordyce granules developing from adolescence (Figure 2).

METHOD

For both patients a choice was made to use superpulsed CO₂ Laser (Luxar™, Woodinville, Washington, USA), with prior regional block and local infiltration with 2% lidocaine and 1:100,000 epinephrine. A 5W power level with a 2mm spot size was applied in two passes, with the necrotic tissue being removed with moistened gauze (Figure 3). Following the procedure, patients were instructed to use a cream containing fibrinolysin, deoxyribonuclease and chloramphenicol (Fibrase™) three times per day for ten days.

RESULT

In approximately ten days there was local re-epithelialization in both patients. After one year there was no recurrence in the treated area, with satisfactory aesthetic results (Figures 4 and 5).

DISCUSSION/ CONCLUSION

There are few studies on Fordyce granules in the dermatologic literature. Though they are considered a normal variation of the sebaceous glands, some patients experience aesthetic concerns around them, and thus alternatives have been developed to resolve their appearance.^{1,7-10} A report on photodynamic therapy with 5-ALA based treatment yielded poor results with significant side effects, such as pain, erythema, edema, blistering and post-inflammatory hyper-pigmentation.⁸ Monk treated a patient with oral isotretinoin for cystic acne, verifying regression of the Fordyce granules and recurrence after nine weeks.⁹ Another report cites the use of bichloroacetic acid in a patient's upper lip with a reduction in the granules for at least three months.¹ The use of electrodesiccation and curettage was the therapeutic option in another case.¹⁰



FIGURE 1: Patient 1 – Multiple yellow papules in the upper lip



FIGURE 2: Patient 1 – Immediately after the procedure with CO₂ laser

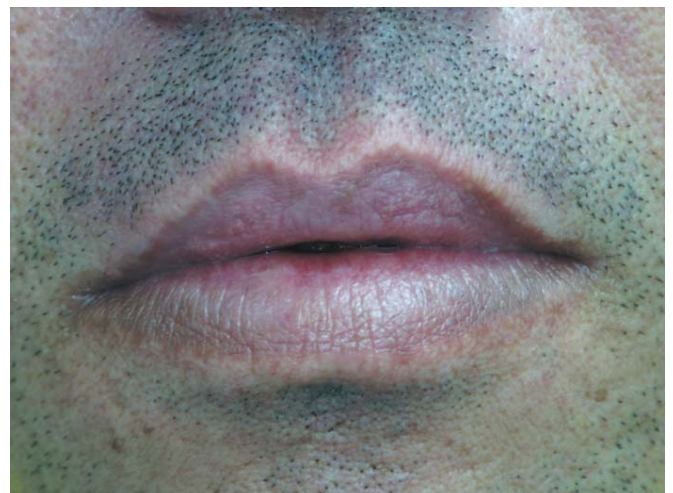


Figure 3: Patient 1 – Final result after one year



FIGURE 4: Patient 2 – Initial picture



FIGURE 5: Patient 2 – Results after one year

The CO₂ laser has a 10,600nm wavelength, which is located in the distant spectrum of the infrared band. It has been used for over 30 years in surgical dermatology due to its efficiency in vaporizing and cutting tissues, and for producing an effective intraoperative hemostasis.⁷ Ocampo-Candiani et al. used CO₂ laser in two patients and obtained consistent results, similar to those obtained in the previous study.⁷

Current ultrapulsed systems—such as the one used in the authors' cases—allow the control of the tissue's temperature, and a precise ablation.⁷ This laser can be applied with good results in the treatment of various benign skin lesions.⁷

Taking into account its straightforward use and the accuracy with which the lesions are removed, the authors believe that CO₂ laser is a good alternative for the treatment of Fordyce granules. ●

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