



Adjuvant treatments to prevent recurrence keloid in the ear: case report

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ABSTRACT

Keloid is a benign cicatricial tumor, in which there is a loss of control mechanisms that normally regulate the balance of tissue repair and regeneration. Trauma is a fundamental factor in causing a chain reaction that culminates in the appearance of keloids, whether as a result of burns, traumatic wounds, perforations for decorations or surgical incisions. The objective of this study is to discuss therapeutic approaches for the treatment of keloids and hypertrophic scars, providing a comprehensive review of the scientific literature on the subject. The research examines available treatment options, highlighting the need for a more specialized and personalized approach to the care of these patients. Critical analysis of the literature reveals valuable insights into the efficacy of therapeutic interventions and provides a solid foundation for future research and clinical practice in this area. It is concluded that the complexity in the treatment of keloids and hypertrophic scars is of vital importance in personalized therapeutic approaches, thus highlighting the constant need for research to improve clinical results.



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INTRODUCTION

Keloids are benign fibroproliferative lesions that result from excessive collagen deposition and fibroblast hyperactivity, leading to scars that extend beyond the original wound margins. They are commonly triggered by burns, surgical trauma, acne, piercings, or tattoos, and typically appear on the face, earlobes, trunk, and neck. Clinically, they present as firm, erythematous or hyperpigmented scars, often associated with pain and pruritus. Their prevalence ranges from 4% to 16%, with higher incidence in adolescents and young adults, particularly among Asian and African-descendant populations. Beyond physical discomfort, keloids can compromise aesthetics, self-esteem, and quality of life, sometimes leading to social isolation and psychological distress. Diagnosis is primarily clinical, with biopsy reserved for doubtful cases. Management remains challenging due to high recurrence rates and includes preventive measures such as silicone-based therapies, botulinum toxin, and tension-free sutures, as well as conventional options like corticosteroids, cryotherapy, surgical excision, radiotherapy, and laser therapy. New approaches, including photodynamic therapy, interferon, stem cells, autologous fat grafting, and verapamil, show promise but require further investigation.

CASE REPORT

Complaint: Large, raised, shiny, hardened lesions on the auricle of both ears, measuring approximately 6.0 x 2.0 x 2.0 cm on the left and 3.0 x 3.0 x 1.5 cm on the right.
He reported having undergone bilateral otoplasty to correct prominent ears in December 2016, without intraoperative complications.
However, the lesions progressively developed beyond the original wound, characterizing themselves as keloids.
In November 2021, the patient underwent bilateral surgical excision of keloids with intraoperative triamcinolone infiltration. Postoperative management included triamcinolone application to the surgical wound and adjuvant local electron beam radiotherapy to prevent recurrence.

IMAGES



Image 1. Recording of keloid lesions before treatment.

TREATMENT

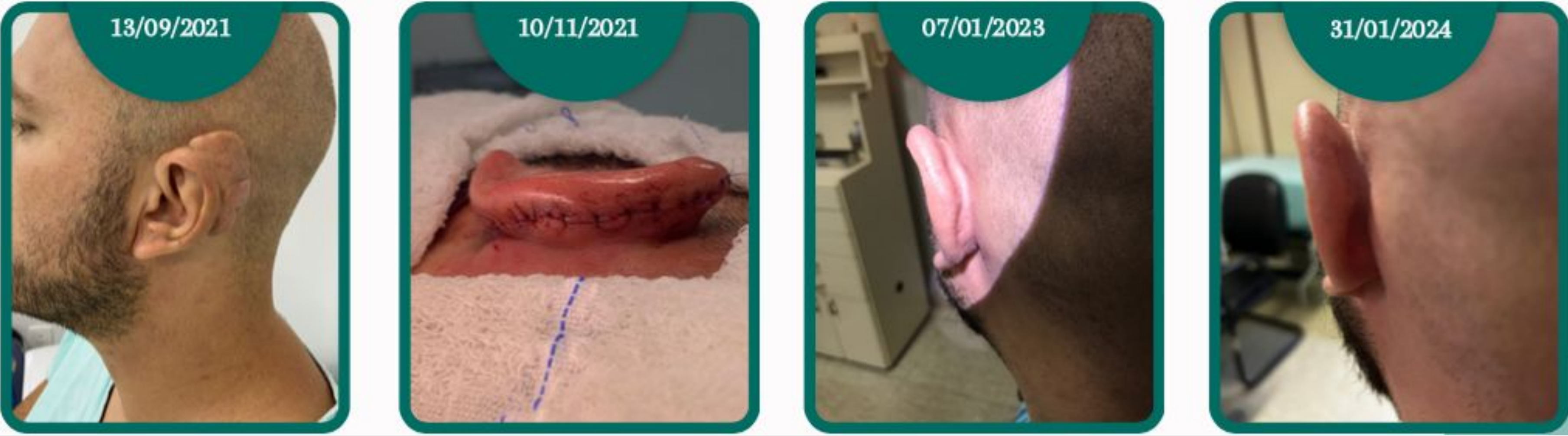
Bilateral surgical excision of keloids with intraoperative triamcinolone infiltration.
Subsequent postoperative care consisted of triamcinolone application to the surgical wound and local electrotherapy to prevent recurrence.

RADIOTHERAPY
□ Topical, intralesional corticosteroid therapy, intraoperatively (11/10/2021),
□ 30 days after the procedure (12/01/21) and
□ 90 days after the procedure (02/17/22) at a dose of 1 ml in each ear of triamcinolone (20 mg/ml).

CORTICOTHERAPY
□ 3 electron beam radiotherapy sessions at the HUB;
□ Daily dose administered to each ear: 200 cGy;
□ Total dose administered to each ear: 1,500 cGy;
□ Non-consecutive days;
Session schedule:
• First session (November 11, 2021): 24 hours post-surgery.
• Second session (November 16, 2021): 6 days post-surgery.
• Third session (November 18, 2021): 8 days post-surgery.

FOLLOW-UP

After 2 years, 2 months, and 21 days of clinical follow-up, the patient shows no signs of hypertrophic lesion or keloid.



CONCLUSION

Intralesional corticosteroid therapy and electron beam radiotherapy: good adjuvant treatment options to prevent recurrence.
The importance of prevention in the surgical wound healing process, given the high recurrence rates with conventional treatments, reaching 80% of cases.
Appropriate Surgical Technique: reduces excessive manipulation and potential trauma.
The implementation of these measures aims to provide a better quality of life for the patient in the post-surgical period.
Thus, intralesional corticosteroid therapy and electron beam radiotherapy represent valuable adjuvant options for preventing keloid recurrence. However, it is important to emphasize that prevention plays a crucial role in the wound healing process. Preventive strategies are more effective than treatment, given the persistently high recurrence rates associated with keloids. The use of appropriate surgical techniques, minimizing tissue manipulation and excessive trauma, as well as careful management of hematomas and infections, are essential early interventions to avoid reparative failure and to ensure better postoperative quality of life for the patient.

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