ISSN: 2754-494X

Journal of Dermatology Research Reviews & Reports

SCIENTIFIC Research and Community

Case Report

Open Access

Giant Keloid of the Ear Lobule: Case Report and Brief Review of Literature

Rodrigo Lourival Oder Coutinho[1]*, Bruno Camara de Barros[2], Etore Guerra Pedroni[2], Gustavo Pedrini Bissoli[2] and Mitre Kalil[3]

[1]General Clinical Physician at the Cassiano Antonio Moraes University Hospital (Hucam)

[2]Physicianat the Higher School of Sciences of the Santa Casa de Misericórdia de Vitória

[3]Surgeon at the SantaCasa de Misericórdia Hospital in Vitória

ABSTRACT

Keloids are benign lesions arising from fibrocollagenous growths that rise above the surface of the skin and extend beyond the edges of the original wound. They usually arise after a cutaneous insult, but idiopathic spontaneous etiology has also been reported. They rarely regress spontaneously. And they are difficult to treat due to high recurrence. We report a case of giant earlobe keloid in a 35-year-old male patient with good response after surgical treatment and local radiotherapy. Giant keloids present a treatment challenge due to complex and poorly understood pathophysiology. Few are the successful reports in the approach. In this article, we review the available literature to discuss the pathophysiology and treatment modalities that can be used to prevent recurrence of keloids.

***Corresponding author**

Rodrigo Lourival Oder Coutinho, General Clinical Physician at the Cassiano Antonio Moraes University Hospital (Hucam)

Received: August 12, 2022; **Accepted:** August 18, 2022; **Published:** August 25, 2022

Keywords: Keloid, Giant, Surgery, Radiotherapy

Introduction

Keloids and Hypertrophic Scars are considered fibroproliferative disorders, characterized by the abnormal regenerative process of the dermis when exposed to some injury [1, 2]. The normal healing process follows three phases: inflammatory, fibroblastic and maturation. In the keloid, the error is in the fibroblastic phase, when there is an exacerbated expression of growth factors, mainly the transforming growth factor beta (TGF-ß), responsible for the chemotaxis of fibroblasts to the inflammatory site, and for the production of collagen. Without adequate regulation, fibroblasts have increased proliferative activity, lower rates of apoptosis and prolonged longevity, resulting in collagen and cytokine production that reach levels up to 20 times higher than normal [3].

Systemic, local and genetic factors directly imply the occurrence and severity of keloids in the world population. Melanodermic individuals of African, Asian and Hispanic origins are more likely to develop it, its incidence varies in these populations from 4.5% to 16%, and during puberty and during pregnancy the number is higher, supposedly due to higher hormone levels [4].

They present clinically with a firm to hard nodule, often itchy and painful, continuing to grow beyond 6 months of wound healing and rarely regressing spontaneously. Diagnosis is based on history and clinical examination and is confirmed by Histopathology [5].

Currently, there is no consensus on a therapeutic approach, and treatment is individualized for each patient4. Modalities include simple excision, intralesional excision, local irradiation, steroid therapy, pressure therapy, cryotherapy, silicone gel application, and enzyme therapy, alone or in combination. No single modality is 100% effective and recurrence rates range from 50% to 100% [5, 6]. Earlobe keloids have a high recurrence rate (up to 80%) after surgical excision, leaving a profound psychosocial impact on the patient. patient. The aim of the present study is to report a case of giant earlobe keloid with good therapeutic response after surgery and radiotherapy.

The present study was approved by the Research Ethics Committee (CEP) under opinion embodied in 5.370.435.

Case Report

A 35-year-old male, previously healthy, melanodermic patient, with smoking and alcohol consumption stopped for 12 years and a positive family history of keloids. On September 20, 2021, he attended the outpatient clinic complaining of a giant keloid that had recurred in the left ear lobe, clinically presenting as a firm nodule with a rubbery consistency measuring 14.0 x 7.5 x 6.5 cm (figure 1) .

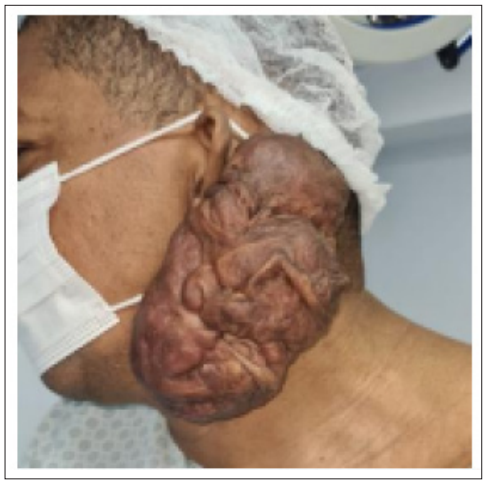
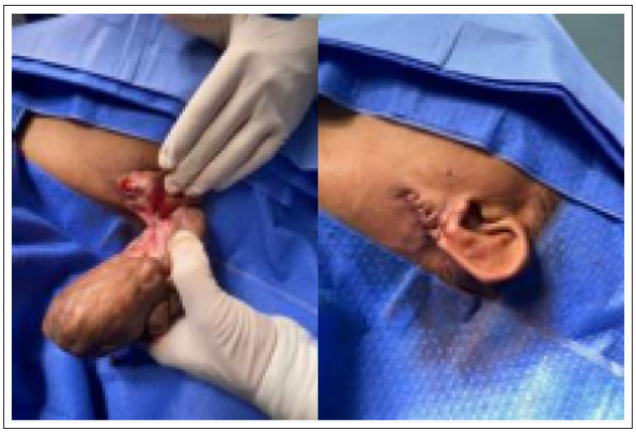


Figure 1: Giant keloid in the left ear lobe

When asked about the onset of lesions in the lobular/auricular topography, he reported the development of keloids in both ears at the age of 17, with an accelerated evolution, after the placement of earrings. He sought medical care where surgical treatment was chosen, not performing adjuvant therapy. Refers to a desire for a new surgical procedure to excise the lesion. The patient underwent a surgical approach, with excision of a giant keloid in the left ear (Figures 2 and 3).



Figures 2 and 3: Excision of the giant keloid in the Surgical Center

The patient returns 4 months after the procedure to the outpatient clinic with complete regression of the lesion and no signs of recurrence. He was instructed to seek the Cassiano Antônio Moraes University Hospital (HUCAM) to perform adjuvant radiotherapy.

Discussion

Keloids are benign fibroproliferative disorders of the dermis that are very common in the world population. Genetic and environmental factors play a large role in the pathophysiology of the disease, such as a positive family history, onset of the lesion between 10 and 30 years of age, melanodermic individuals of African, Asian and Hispanic origins, hormonal spikes during pregnancy and puberty, and systemic arterial Hypertension [3, 4].

There are 4 reports in the literature of giant ear keloids, measuring at least 10 centimeters in their longest axis. Ranjan S et al.6 documented the occurrence of a 15 x 8 cm specimen in the left ear lobe, mobile, with a firm consistency with an irregular surface and well-defined margins, in a 42-year-old man with melanoderm, not reporting a precise time of evolution.6 Filho FRM [7]. Reported the case of a 31-year-old man with no defined ethnicity with a keloid lesion in the left ear lobe measuring 15 cm in its longest axis, which occupied the entire ipsilateral retroauricular portion, with onset of the pathology at 11 years of age after trauma.7 In the Capital District from Bamako, Mali, the case of a 19-year-old melanodermic male with a 10 x 6 cm hard, fixed, sessilebased, normal color keloid mass in the right retroauricular region was reported. 8 In Havana, Cuba, the case of a 33-year-old melanodermic man, previously healthy, with a keloid tumor in the right and left ear lobes, measuring 20 x 8 and 15 x 10 centimeters, respectively, was reported, the lesions contained partial skin loss, edema and secretion, with a pathological evolution time of 2 years.9 The findings suggest the rarity of finding such extensive keloid dimensions in this topography.

In giant-sized keloids, surgical excision is mandatory, reducing tension on the edges of the wound, helping to reduce inflammation in the skin, and specific techniques such as Z-plasty, W-plasty, grafts and flaps can be used, but surgery as monotherapy is not indicated, since it results in high recurrence rates in the range of 45% to 100%, and the combination of other forms of treatment is recommended, such as: continuous pressure after surgery, intralesional corticosteroids, carbon dioxide laser, application of silicone gel, administration of retinoic acid, covering with silicone gel, cryosurgery, use of chemotherapeutic agents (5-fluorouracil), intralesional interferon and radiotherapy [10].

However, there is no concrete evidence that these methods are effective in preventing recurrence, with radiotherapy being the treatment that has shown the greatest effectiveness in preventing the formation of keloids with success rates in the range of 67% to 98%, with recurrence of about of 22%.2.

Radiotherapy acts mainly on angiogenesis, reducing the number of vessels and inflammation, suppressing the development of keloids and reducing the activity of fibroblasts.1 It is worth mentioning that the keloid, once formed, is no longer radiosensitive, and young fibroblasts are the cells that have its proliferation and differentiation stimulus inhibited with irradiation, whether from betatherapy or electron beam irradiation.11 Therefore, it is of relevant importance to complement 24-48 hours after surgical excision.4-10 Considering betatherapy and electron beam irradiation, both are the main options, with electron beam irradiation having the lowest recurrence rates due to a more homogeneous and precise distribution of energy in the tissue [11].

Conclusion

Keloids are benign fibroproliferative disorders of the dermis that are very common in the world population and despite being part of many visits in surgery and dermatology outpatient clinics, the case described is considered rare due to the dimensions presented and the difficulty of treatment. The lesion was well treated with tumor excision and radiotherapy. There was no recurrence over the 4-month follow-up. More research and multicenter trials should be carried out to establish the best therapeutic option for keloids.

References

1. Ogawa R (2017) Keloid and Hypertrophic Scars Are the Result of Chronic Inflammation in the Reticular Dermis. International Journal Of Molecular Sciences, [S.L.] 18: 606.
2. Son D, Harijan A (2014) Overview of Surgical Scar Prevention and Management. Journal Of Korean Medical Science 29: 751-757.
3. Mcginty S, Siddiqui Wj (2022) Keloid. Treasure Island (FL): StatPearls Publishing

4. Ojeh N, Bharatha A, Gaur U, Forde Al (2020) Keloids: current and emerging therapies. Scars, Burns & Healing, [S.L.] 6: 205951312094049.
5. Ogawa R, Dohi T, Tosa M, Aoki M, Akaishi S (2021) The Latest Strategy for Keloid and Hypertrophic Scar Prevention and Treatment: the nippon medical school (nms) protocol. Journal of Nippon Medical School, [S.L.] 88: 2-9.
6. Ranjan S, Ahmed A, Harsh V, Jha, Nawalk (2017) Giant bilateral keloids of the ear lobule: case report and brief review of literature. Journal of Family Medicine And Primary Care, [S.L.] 6: 677-679.
7. Filho Frm, Assis Gdrr, Pereira Ls, Buffo Th, Stolf Ho (2020) Radioterapia com feixe de elétrons adjuvante à cirurgia de queloide gigante recalcitrante na orelha. Surg Cosmet Dermatol. Rio de Janeiro 12: 83-86.
8. Touré S, Mallé M (2019) Chéloïde géante retro-auriculaire droite post traumatique. The Pan African Medical Journal 33: 62.
9. Canfux Aib, Mesa Sv, Fernández Mlm, Alfonso Irp (2020) Cicatriz queloide gigante. Rev Cub Med Mil 24-49.
10. Ballin A, Becker R, Ribeiro T, Cavichiolo J, Ballin C, et al. (2012) Treatment of retroauricular keloids: revision of cases treated atthe ent service of hc/ufpr. International Archives of Otorhinolaryngology 16: 195-200.
11. JÚNIOR BO (2009) Estudo comparativo entre o tratamento radioterápico com elétrons e betaterapia, após cirurgia de queloides. Surgical & Cosmetic Dermatology 1: 53-57.