



An Unusually Giant and Aggressive Earlobe Keloid - A Case Report

Santosh Kumar Swain,^{1*} Ishwar Chandra Behera², Alok Das¹, Santosh K Pani¹, Mahesh Chandra Sahu³

¹MS, DNB, MNAMS, Department of ENT, IMS and SUM hospital, Siksha 'O' Anusandhan University, K8, Bhubaneswar, Odisha, India.

²MD Department of Community Medicine, IMS and SUM hospital, Siksha 'O' Anusandhan University, K8, Bhubaneswar, Odisha, India.

³MSc, PhD, Central Research Laboratory, IMS and SUM hospital, Siksha 'O' Anusandhan University, K8, Bhubaneswar, Odisha, India.

*Corresponding author's E-mail: santoshvoltage@yahoo.co.in

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ABSTRACT

Earlobe keloids are benign, fibrous proliferations that show high rate of recurrence. Traumas to the earlobe such as ear piercing, burns or surgical interventions are important in the pathogenesis of the disease. Keloids are always difficult to treat and make challenging situation for patient and treating doctor. It has a significant psychosocial impact on the patient. We are presenting a giant keloid in earlobe with a large ulcer over it with excessive itching habit make patient socially awkward. This giant keloid in the ear lobule is reported in this paper, unusual by virtue of its size and is the biggest earlobe keloid ever seen in our tertiary care center. Here excessive itching is the key factor for aggressive growth of keloid.

Keywords: keloid, earlobe, ulcer.

INTRODUCTION

Keloid is a frustrating clinical problem in wound healing. The first written description of keloids was attributed to the pyramid age in ancient Egypt.¹ In 1806, Alibert coined the term "Cheloid" from the Greek word "crab like".² Cosman documented the presentation, characteristics and treatment of keloids in the first systematic review of keloids in 1961.³

Keloids are dermal fibro proliferative disorders unique to humans, characterized by excess deposition of collagen in the dermis and the subcutaneous tissues.⁴ The incidence of keloid formation varies from race to race. Black people and Asian people are more likely to develop these lesions than Caucasians, the incidence varying from 5:1 to 15:1. The external ear is the anatomic site most prone to unfavorable wound responses such as keloids. Ear lobe keloids are common response to ear piercing, especially in darker skin types. The aesthetic considerations of earlobe keloids are serious and their treatment is difficult. We are presenting a rapidly grown giant keloid at earlobe.

CASE REPORT

A 52 year old lady presented with massive swelling on the right side ear lobe Fig.1 since 6 months. She had done first earlobe piercing during childhood in right side and again done second piercing just after first one 6 months back. She developed excess itching over second piercing area and developed a small nodular mass. The swelling was firm and mild tender and rapidly growing to present size, measuring 10x8 cm. There is large ulcer over the keloid due to excessive and chronic itching over the mass. A clinical diagnosis of keloid was made. She has no other medical and surgical history. Triamcinolone acetate was injected perilesionally at the keloid site at weekly

intervals for three weeks prior to surgery. The patient was operated under local anaesthesia. Keloids were surgically removed and ear lobe was reconstructed, following which she was advised to use silicone gel sheet and pressure ear clips. After excision, the site was also injected triamcinolone locally once week for three weeks. Excisional biopsy from the mass was taken which under light microscope showed mild and deep dermal sclerosis with abundant proliferating fibroblasts intermixed with dense bundle of collagen (Fig.2) diagnostic of keloid. Follow up of patients after 6 months and 1 year showed no evidence of recurrence.

DISCUSSION

A keloid may be defined as a benign growth of dense fibrous tissue developing from an abnormal healing response to a cutaneous injury such as surgery, extending beyond the original borders of the wound or inflammatory response. It is one of the most frustrating clinical problems in wound healing. Keloids, in distinction to normal scars, generally increase in dimension over time, and in addition to creating deformity can cause numbness, tingling and itching.⁵ Our case was presenting with severe itching on earlobe scar leading to giant size keloid in just 6 months. In simpler words, one can describe a keloid as 'a scar that does not know when to stop'. Earlobe keloids show a high rate of recurrence of upto 80% following surgical excision.⁶ Earlobe keloids usually appear as shiny, smooth, globular growth on one or both sides of earlobe. Patients frequently complain of cosmetic embarrassment as in our case. The keloid appearance is about 15 times higher in dark skin individuals than in whites.⁷ Higher incidence is seen during puberty and pregnancy, periods with hyperactivity of the pituitary gland.⁸





Figure 1: Right side earlobe showing a giant keloid with an ulcer over the surface.

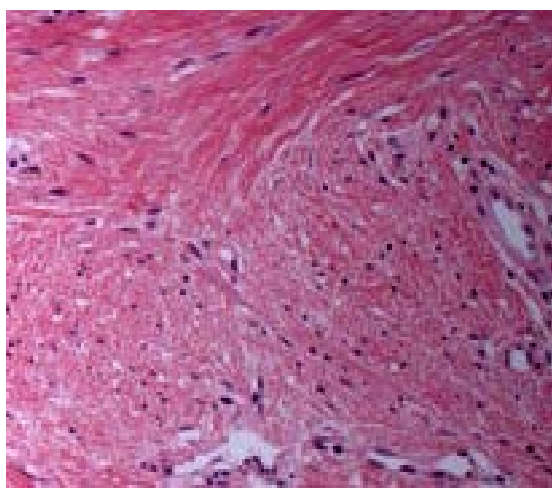


Figure 2: Microphotograph showing keloidal collagen with abundant fibroblasts.

Although there are many theories about keloid formation, their etiology is still unknown. Osman claim that an autoimmune response to sebum trapped deep in dermis may lead to keloid formation.⁹ A disorder of the hormone that stimulates melanocyte is one of the factors that is accused of causing keloid formation. In a recent study it is reported that cyclooxygenase (COX 2) enzyme gene expression is absent in abnormal scar derived fibroblasts and may contribute to the development of fibrotic scars, and that COX gene expression could be modulated by hexose sugars and sucrose, especially in normal granulation tissue fibroblasts (about 90% decrease at maximum) and hypertrophic scar fibroblasts (almost seven folds increase).¹⁰ It has also been shown recently that sucrose type 1 and type 3 collagen metabolism in granulation tissue fibroblast cultures, but it regulates type 1 and type 3 collagen metabolism in fibroblast cultures derived from fibrotic skin lesions differently, changing the collagen metabolism toward normal.¹¹ Experimental study implicates the importance

of transforming growth factor beta (TGF- β) in cutaneous scarring as well as scarring in other body parts.¹² Although TGF- β is needed for wound healing, overproduction of it can result in excessive deposition of scar tissue and fibrosis. Aberrations in the different cytokines like interleukins 6, 13 and 15 may also have role in keloid formation.¹³ Keloid scars are nodular skin lesion that in severe form resemble neoplasms and cause much physical and mental distress. Attempts for treatment may make them worse and presently there is also no single therapeutic modality is available. The location, size, depth and duration of the earlobe keloid influence the choice of therapy. Excision can also be used for large keloids, for debulking or removal of infected regions.¹⁴ Surgical excision alone leads to high chance of recurrence rate, between 50-100%.¹⁵

Therefore it is rarely used as monotherapy and so postoperative recurrence can be reduced by adjunctive therapies such as intralesional corticosteroid injections, radiotherapy, pressure therapy and immuno modulators.

CONCLUSION

The etiopathogenesis of keloid remains an enigma and is characterized by excessive deposition of collagen in the dermis and subcutaneous tissues secondary to traumatic or surgical injuries. The large size and rapid growth with excessive itching are unique presentation of this keloid and has significant psychosocial impact for the patient. This is the biggest earlobe keloid seen in our center. Here excessive itching is the key factor for aggressive growth of keloid.

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