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LOOP ELECTROCAUTERY IN THE MANAGEMENT OF GIANT RHINOPHYMA – A CASE REPORT.

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ABSTRACT A 56 years old male patient presented to our institution with a gradually progressive bulbous, multi-lobular, non-tender, firm, rubbery swelling of tip and dorsum of nose over last 20 years, extending to bilateral alae, with prominent skin pores, causing functional and cosmetic impairment. Condition was clinically diagnosed as rhinophyma and accorded 6 points under Rhinophyma Severity Scale. Under general anaesthesia, excision was done by shaving of the mass from underlying cartilage without damaging it, with the use of loop electro-cautery. Wound was allowed to granulate and heal by secondary intention, with no recurrence observed in follow-up. Histopathological examination confirmed rhinophyma.

KEYWORDS :

INTRODUCTION

Acne rosacea is characterised by enlarged superficial blood vessels in the skin of the nose, causing a dusky, red color and a shiny surface. Rhinophyma, or potato-nose, is a chronic edematous, sebaceous and connective tissue hypertrophy of nasal skin, characterised by bulbous hypertrophy of the sebaceous glands, soft tissues and blood vessels of the nasal tip. It is a slow growing benign tumour seen in long standing cases of acne rosacea.Histologically, in addition to sebaceous hyperplasia, an abnormal vascular development (telangiectasis), hypertrophy of subcutaneous tissue and atrophy of dermis is often observed."

Rhinophyma is often unsightly causing significant aesthetic and psycho-social disadvantages. In the worst cases, it can cause upper airways obstruction due to extensive alar thickening and difficulty in eating. In such cases with gross deformity, surgical excision of the tumour is necessary, avoiding damage of the underlying cartilages.

Case report

A 56-year-old non-smoker, alcoholic, man presented to the ENT outpatient department with a huge mass gradually growing from the tip of the nose over the last 20 years, now causing difficulty in breathing, eating and vision. In addition, due to cosmetic impairment the patient suffered from low self-confidence and self-esteem.

On examination, the mass was bulbous, firm, rubbery, multi-lobulated, extending from the dorsum of the nose to bilateral alae and projected anteriorly from nasal tip. The mass was non-tender with prominent skin pores and on gentle pressure, yellow cheesy material oozed out. It was clinically diagnosed as a rhinophyma and based on the Rhinophyma Severity Index (RHSI) by Weitzig, the degree of disease severity was determined as 6, or Giant rhinophyma. (Figure 1)Routine investigation did not reveal any abnormality. The patient was seronegative for HIV and Hepatitis B.

Based on the severity of the disease and the possibility of significant blood loss at the time of excision, the patient was put up for surgery under general anaesthesia in the Operation Theatre (OT). Preoperative IV Ceftriaxone (antibiotic) was given for infection prophylaxis. The lesion was excised by meticulously shaving it down to the tip of the nose, preserving the alar cartilage. A loop electrocautery made by winding a 28-gauge, stainless steel wire round the tip of a monopolar cautery, was used to shave off the lesion from the underlying cartilage, with precaution not to damage the underlying nasal cartilage. (Figure2,3). No skin grafting was done and the wound was allowed to granulate and heal by secondary intention. The patient was discharged 8 days after surgery. The respiratory difficulty, feeding and visual problems disappeared following surgery. The patient was followed up for 10 months and no recurrence was reported during the period. Due to good aesthetic results, the patient's self-confidence improved considerably. (Figure 4,5,6)

Pathologic examination revealed a tumour of 12 × 15 × 12 cm in size with a marked thickening and enlargement of the subcutaneous tissue of the nose. Histologic examination showed features of rhinophyma with prominent sebaceous hyperplasia, along with diffuse dermal fibrosis. There were peri-follicular lymphohistiocytic infiltrates. There was cryptic invagination of the surface epithelium.

DISCUSSION

Rhinophyma commonly occurs in Caucasian men between 50-70 years, as an advanced stage of acne rosacea, and is rarely reported in men of Asian descent.[3]Several triggers have been suggested for the development of rhinophyma, like sun exposure, intake of hot liquid beverages or soups, vasodilator drugs, irritating cosmetics and exercise. Dysfunction of the innate immune system resulting in upregulation of proinflammatory cytokines and angiogenic substances has also been hypothesised.

Inflammatory response to *Dermodex follicurum* (dermodex mite), a normal commensal of the human skin, seen in higher numbers around the follicles of rhinophyma, has been proposed as a possible mechanism. Helicobacter pylori, has also been suggested as a cause for rhinophyma.[4]Rhinophyma has also been associated with consumption of alcohol (whiskey nose or gin nose), although no link between rhinophyma and alcohol consumption could be established. However, the exact mechanisms of the pathogenic changes in rhinophyma are not yet known, and it is likely multifactorial in nature.

Several methods are available nowadays to treat Rhinophyma, which include mechanical dermabrasion,electrocautery and dermabrasion, Hydrodissection (versajet system),CO2 laser, Nd: YAG laser, razor blade and argon beam coagulator,etc. The results of treatment among laser therapy are comparable to cold" or electrosurgery techniques, in terms of restoration of function and cosmesis. In addition, no difference in duration of surgery using CO2 laser vs. electrosurgery has been reported. Not surprisingly, therefore, there is still no consensus among surgeons, who follow the "to each his own technique" mindset.In general, while laser treatment, hydrodissection and dermabrasion are used in small dimensioned lesions, at the beginning of the disease, large lesions are dealt with by classical surgical excision.

Our case report emphasizes the usefulness of surgical shaving of the multilobulated lesion by controlled ablation using loop electrocautery to treat large rhinophymas. This procedure is less aggressive, is easy to perform, universally available, cheap and leads to acceptable cosmetic and functional results, comparable to laser therapy. Furthermore, no complications such as scarring or hyperpigmentation were recorded following this operation after long-term follow-up.The post-surgical course following the procedure, although protracted, is shorter than all other forms of treatment. The full thickness epidermal and particle thickness dermal loss of the distal nose needs to heal by secondary intent. It takes approximately 1-2 weeks for the open wound to close while the erythema and oedema of the nose takes a month to resolve.The patient therefore needs to be counselled beforehand about the expect time of recovery following the operation.

CONCLUSION

Surgical loop electro-cauterization to shave off the abnormal tissue off the underlying cartilage is one of the best treatment option for big rhinophymas (Stage 6). It is a cheap one-time procedure, allows for satisfactory aesthetic and functional outcomes, and has a short recovery period.

Figure 1: Pre-operative views (Anterior and lateral view)

Figure 2: Electrocautery loop

Figure 3: Operative procedure

Figure 4: Post-operative Day-2

Figure 5: Post Operative Day 8

Figure 6: Post Operative Day 30

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