

Case Report
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Surgical Treatment of Rhinophyma : About a Case and Literature Review

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Introduction

Rhinophyma is an advanced stage of rosacea affecting soft tissues and leading to disruption of the nasal architecture, obstruction of the airways, and disfigurement of the aesthetic units of the nose. It is most often found in Caucasian men over the age of 50 with a male to female ratio of 5 to 1. The exact cause of rhinophyma is unknown; the probable origin is multifactorial. The primary etiology is unregulated superficial vasodilatation. Several hypotheses suggest there may be a potential role of environmental factors and microorganisms such as *Helicobacter pylori* and *Demodex folliculorum*. Vitamin deficiency and alcohol or caffeine use may be causative or exacerbating factors.

Understanding of the disease has improved and multiple surgical techniques have been described, but only one principle: decortication. Medical treatment, on the other hand, only stabilizes the disease.

Case Report

A 63-year-old man, with a history of high blood pressure under treatment, and excessive alcohol consumption in the past, consults for a large rhinophyma responsible for aesthetic and functional discomfort. The patient was put on several medical treatment with antibiotics and retinoid without noticeable improvement.

The therapeutic approach was to perform a derma section using number 15 scalpel after infiltration xylocaine with adrenaline. The excess tissue was removed layer by layer. The hemostasis was achieved with a bipolar electrocautery. The wound was left to heal by secondary intention.

The histopathological analysis showed the presence of multiple infundibular and pilar cysts with keratinized content and fibrotic connective tissue.

The application of sun protection and the reduction of contributing factors were requested from the patient. Follow-up was continued with monthly visits, and the 1 year check-up was satisfying.

Discussion

Rhinophyma is a skin disorder characterized by a large, bulbous, and erythematous appearing nose. This aspect results from a probable unregulated superficial vasodilatation. The extravasation

leads to local inflammation, fibrosis as well as skin and sebaceous hyperplasia. The evolution is marked by the appearance of telangiectasis and irregular, lobulated thickening of the skin of the nose.

It is considered to be an advanced stage IV rosacea.

Historically, rhinophyma was considered to be related to alcohol consumption, this consumption is responsible for local vasodilation worsening symptoms. This alleged association with alcohol has caused a great deal of social stigma and loss of self-esteem in patients suffering from the disease, with several nicknames such as “whiskey nose” and “rum nose” [1].

Although topical antibiotics and retinoids are medical options for treating rosacea, they have not been shown to be effective in treating rhinophyma.

Once developed, the dermatologist as well as the plastic surgeon agree on the surgical indication as the only successful alternative.

Several surgical techniques are described for the treatment of rhinophyma depending on the size of the lesion and the experience of the surgeon.

Removing the excess tissue, without the risk of exposing the underlying osteocartilaginous structures, and less bleeding remains the goal of this intervention.

Dermasection consists of performing a full thickness resection followed by reconstruction with a flap or skin graft.

This approach offers the advantage of immediate coverage of tissue loss, avoids damage from thermal dissection with an electrocautery causing burns to the underlying osteocartilaginous structures.

Complete resection decreases the risk of recurrence by removing all pathological tissue.

However, this approach is increasingly neglected due to the risk of necrosis of any flaps and grafts [2].

Other schools prefer to do a partial resection of pathological tissue,

allowing to preserve the pilosebaceous unit by excising only the superficial tissue and retaining the underlying adnexal structures.

This partial method increases the risk of retraction after healing but also of retouching sessions to further refine the nose [2].

Cryosurgery is no longer used, although its benefits are related to low postoperative pain and no damage to the cartilage. Nevertheless, it exposes to an additional risk of scarring, skin discoloration and difficulty of shaping the nose [2].

Electrocoagulation has the advantage of being the least bloody technique. On the other hand, it does not allow a histological analysis of the fragments and can cause thermal burns of the surrounding elements inducing with delayed wound healing [3].

The laser (CO₂, Argon, Nd-YAG) has been used since the end of the 1980s, it allows good control of hemostasis. Easy to use, it limits the burns of the underlying tissues. This method is reserved for the resurfacing of early and small lesions [3-4].

Dermabrasion allows the nose to be modeled respecting its anatomy. Its advantages are moderate cost and good scarring. In contrast, its main inconvenient is the projection of microparticles during the operative procedure requiring extensive cleaning of the operating room after the procedure. Likewise, it does not allow a histological analysis of the resected tissues.

The hydro-dissection (Versa jet-TM system) uses a flow of physiological serum at high pression, allowing for precise tissue excision, irrigation and then aspiration. Its advantages are the ease of its use, the good reshaping of the nose with a satisfying aesthetic result. Its main drawbacks are the high price compared to other techniques and the inability to analyze histologically the debris [3].

In our clinical case, the technique used was partial derma section of pathological tissues associated with electrocoagulation to control bleeding and to refine the nose.

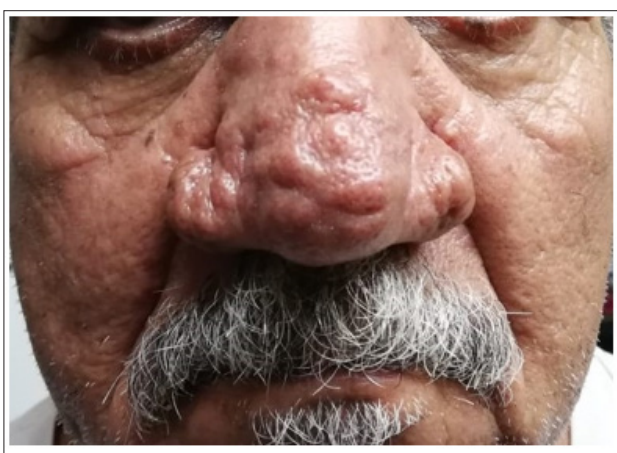
A local treatment based on healing cream and sun protection have been recommended, some authors suggest to start after three weeks of the intervention a treatment based on retinoic acid A and zinc oxide in order to reduce the risk of recurrence [5].



Figure 1-2: Before treatment



Figure 3-4: After treatment



Conclusion

Rhinophyma is the most advanced form of rosacea. The diagnosis is clinical and the treatment is surgical, taking into account its aesthetic and psychological impact on the patient. Several surgical techniques have been developed. The main purpose is to obtain a radical and aesthetic result.

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