

Case Report

The treatment of giant rhinophyma - Case Report

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ABSTRACT The aim of the article is to present an update on the pathophysiology, clinical features and treatment of rhinophyma. A 56 years old patient, living in urban area, presented with a giant rhinophyma which caused him not only upper airways obstruction and difficulty in eating, but also aesthetic and psycho-social disadvantages. The treatment of the patient was a surgical intervention consisting in removal of the nasal tumor and *split-thickness skin grafting* of the defect. The aesthetic result after surgical intervention was very good, there were no postoperative complications or recurrences. Rhinophyma represents the most advanced form of acne rosacea. The diagnosis is easy to establish based on the clinical features of the disease. In advanced forms of rhinophyma, when the tumor is giant, the main method of treatment is surgery.

KEY WORDS *rhinophyma, sebaceous hyperplasia, nasal tumor*

Introduction

Rhinophyma, exuberant hypertrophic acne, with tumoral aspect of the skin of nasal pyramid is characterized by large, bulbous, erythematous appearance of the nose. It can also cause upper airways obstruction and difficulty in eating.

The word rhinophyma is derived from the Greek word "rhis" meaning nose and "phyma" meaning growth. This disease mainly occurs in men after 50 years.

The etiology of rhinophyma is unknown. There were incriminated several factors such as: the excess of steroid hormones (androgens)[1], the presence of a parasite (*Demodex folliculorum*)[1,3], and vitamin deficiency[2]. It is said that alcoholism was a trigger for Rhinophyma, because a lot of alcoholics have erythema of the face, but alcoholism does not cause rhinophyma.

Histological, besides sebaceous hyperplasia, it can also be observed an abnormal vascular development (telangiectasis), hypertrophy of subcutaneous tissue and atrophy of dermis[4,5,6].

Material and methods

A 56-year-old patient, from urban area, chronic alcohol consumer known with chronic hepatitis presented a giant rhinophyma with a slowly progressive development of approximately 10 years. Because of his unaesthetic aspect, the patient was excluded from his group of friends.



Fig. 1 Preoperative view

At the clinical examination it was found:

In the glabellar and malar region, the tegument was changed, the skin being fibrous, crossed by red, purple, dilated follicular orifices.

The nasal tumor was crossed by glandular orifices from which, at pressure, sebum flows.

This nasal tumor, because of its size, caused the obstruction of external nasal orifices and difficulty in eating due to the ptosis through lips.

The diagnosis of rhinophyma was established on the clinical aspect. In order to confirm it a biopsy was performed.

The surgical treatment consisted in the excision of the nasal tumor, with preservation of the cartilages, perichondrium and periosteum. Hemostasis was done by injecting saline and adrenaline peritumoral.

In the same operatory time, there were covered the skin defect, the cartilage, the perichondrium

and the periosteum and then the graft suture and a “tie over” bandage were realized.



Fig. 2 Preoperator view



Fig. 3. Surgical specimen

The histopathological exam helps to establish a precise diagnosis and can point some modifications bounded on injury progression. In our patients case we encounter the next histopathological features: in rhinophyma, the hyperplasia of sebaceous glands came over so obvious and sebaceous ducts are enlarged and filed with keratin and sebum. Fig 7 and 8. In all cases was observed a vasodilatation in the upper and the middle part of derma, presenting a perivascular and perifollicular inflammatory infiltrate with lymphocytes and histiocytes Fig.9. Dermal infiltrates are gathering in little nodular formations and creating granulomas, observing epithelioid histiocytes and, occasionally, can be identified multinucleate giant cells fig.10.

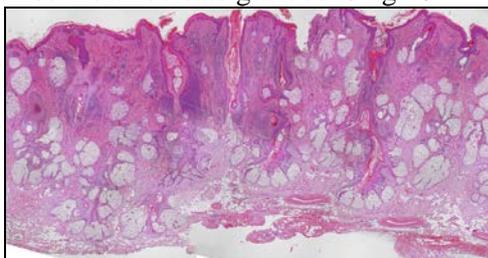


Fig. 4. Rhinophyma hyperplasia of sebaceous glands, HE,

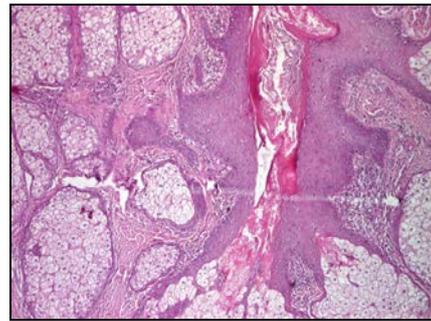


Fig. 5 .Enlarged sebaceous ducts filled with keratin and sebum, HE, x10

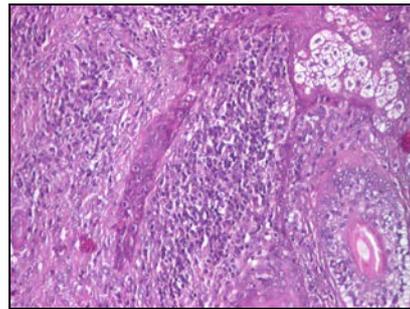


Fig. 6. Lymphocytes and histiocytes perivascular and perifollicular, HE, x10

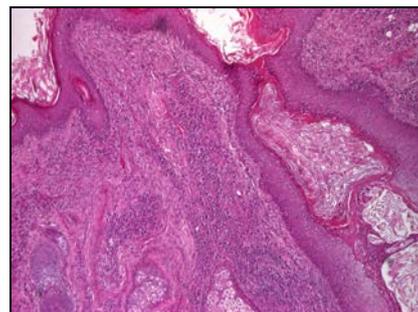


Fig. 7. Dermal infiltrates formations creating granulomas, HE, x10



Fig. 8 Postoperative view after 2 months

Under pre and post-operative antibiotic therapy the evolution was good and the patient was discharged 12 days after the intervention.

After the surgical intervention, the respiratory problems and the discomfort in eating disappeared. Furthermore, due to the good aesthetic aspect the patient was reintegrated into society.

Discussions

Acne rosacea is a chronic or long term facial skin disorder and rhinophyma is the most advanced form of this disease.

In the evolution of acne rosacea there are 4 stages:

Stage I (vascular) – it appears around the age of 20 years and it is characterized by sudden reddening of the face and neck, with sensation of intense heat. The factors responsible for these facts are: the change of temperature, ingestion of hot drinks, alcohol or spicy food

Stage II – it appears around the age of 30 years and it is clinically characterized by permanent facial redness associated with telangiectasia located on the nose, cheek and forehead.

Stage III- it appears around the age of 40 years and it is characterized by inflammatory papules and pustules on an erythematous background. The lesions are spread to areas around the eyes and mouth, without scars and the skin is sensitive, with intolerance at application of local cream

Stage IV – appears around the age of 50 years and it is clinically characterized by thick red skin, with purple striae and nodules located on the nose, ear and zygomatic region

The diagnosis is easy to establish even in the first stage. The clinical examination reveals an enlarged nose, with erythematous and thick skin and tumors of different sizes located on the external nose. It is possible to appear respiratory problems and difficulty in eating.

Histopathological changes can differ considerably from case to case, reflecting the clinical aspect on presentation. Is observed vasodilatation in upper and middle part of derma, and generally, is present in all cases a perivascular and perifollicular inflammatory infiltrate with lymphocytes and hystiocytes and, occasionally, plasmocytes. Can be present a dilatation of lymphatic vases. Dermal infiltrates can be accumulated in little nodular formations and creating granulomas. Can be observed epithelioid hystiocytes in a tuberculoid pattern and, occasional, can be identified multinucleated giant cells. Can be constituted unfamiliar body granulomas around necrotic material storages and around materials resulted after lacerating and destructing the follicles. Concerning follicular involving can differ also from the infundibular spongiosis and exocytosis, to severely alterations type superficial pustular folliculitis. In rhinophyma, sebaceous glands hyperplasia becomes obvious sand sebaceous ducts are enlarged and filled with keratin and sebum. It can be dermal fibroplasia and the amount of the quantity of conjunctive tissue.

The tumor is painless and while pressing it can appear an increased quantity of whitish sebum with fetid smell.

In gigantic forms can be associated with a suborbital region lymphedema, having as a result blepharitis, conjunctivitis and keratitis [2, 7]. In this situations must be required an ophthalmological exam.

The differential diagnosis is made with: angiosarcomas, squamous carcinoma, basocellular carcinoma, sebaceous carcinoma, dermal carcinoma, skin metastasis especially in pulmonary neoplasm, eozinophilic facial granuloma, hemangioma, nasal keloid scars, lymphoma, [7]. In this context performing a biopsy with local anesthesia is necessary. [8]

The therapeutically possibilities in rhinophyma are [7, 9, 10, 11, 12]:

- Laser (CO₂, Argon, Nd: YAG);
- Hydrodissection (versajet system);
- Mechanical dermabrasion;
- Surgical excision.

Laser treatment, hydrodissection and dermabrasion are used in small dimensioned lesions, at the beginning of the disease. When lesion is of large dimensions, it is necessary the classical surgical excision [13]. The dissection must follow the perichondrium of nasal cartilages to avoid chondrolysis [11]. The excision is performed in monobloc; the covering of skin defect can be performed in the same operatory time like in the presented case or after granulation in almost 14-16 days from the first intervention. The skin graft is gathered in all its thickness from hairless areas and face skin-like coloration.

The principal complication that can appear is represented by the nasal cartilages chondrolysis; to avoid this complication it must be not used the electrical scalpel and the electrocoagulation that will compromise the perichondral vascularization [7].

To avoid the appearing of postoperative chondritis must be administrated antistaphylococcal antibiotherapy on systemic as on local way [7].

Conclusions

Rhinophyma represent stage IV of rosacea acne, that give an inaesthetic aspect sometimes monstrous of nose and of face too that required a radically surgical treatment in cases where tumoral mass is big, obtaining an satisfactory aesthetic and functional aspect dissipating the respiratory obstruction and also the alimentation discomfort. The histopathological exam is very useful for establish a certain diagnostic and lesions progression.

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