

Giant Rhinophyma – A case report*

Goran Račić¹, Ivo Glunčić¹, Snježana Tomić², Stjepan Petric¹

¹ Department of Otorhinolaryngology, Clinical Hospital Split, Croatia

² Department of Pathology, Clinical Hospital Split, Croatia

SUMMARY

Rhinophyma is an uncommon condition that often results in both functional and cosmetic impairment. A 65-year old male with a huge rhinophyma, that had extremely grown in the last three years, is presented. The huge tumor was removed under local anaesthesia with electro-surgical knife preserving the alar cartilage. Both, the immediate and late result were satisfactory. The relevant literature is discussed.

Key words: giant rhinophyma, rhinophyma, nasal deformity, surgical excision

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. A manifestation of a severe variant of rosacea involving the lower half of the nose and sometimes spreading to adjacent cheek areas, as sometimes seen in elderly men, is called rhinophyma. Alcohol abuse, damage by heat or cold, gastrointestinal diseases, and disturbance in fat metabolism are considered to aggravate the disease. Rhinophyma is characterised by lobulated overgrowth of sebaceous glands and connective tissue. In case of gross deformity, surgical excision of the tumour by a surgical knife or laser is necessary, avoiding damage of the underlying cartilages.

CASE REPORT

A 65-year old male presented with a three years history of rhinophyma. He noticed thickening of the nose skin about 10 years ago (Figures 1 and 2). He observed a rapid increase in the size of the nose in the last three years. For the patient, it was impossible to breath through the nose while sleeping, and breathing through the mouth was possible only when laying on the side. Besides he had obstructive apneas. In recent months he also experienced difficulties in taking food. His medical history was insignificant apart from pneumonia and an appendectomy. Laboratory analysis revealed a slightly elevated sugar level in the blood. The patient smokes approximately one pack of cigarettes a day and drinks 1-2 L of beer a day.



Figure 1.



Figure 2.

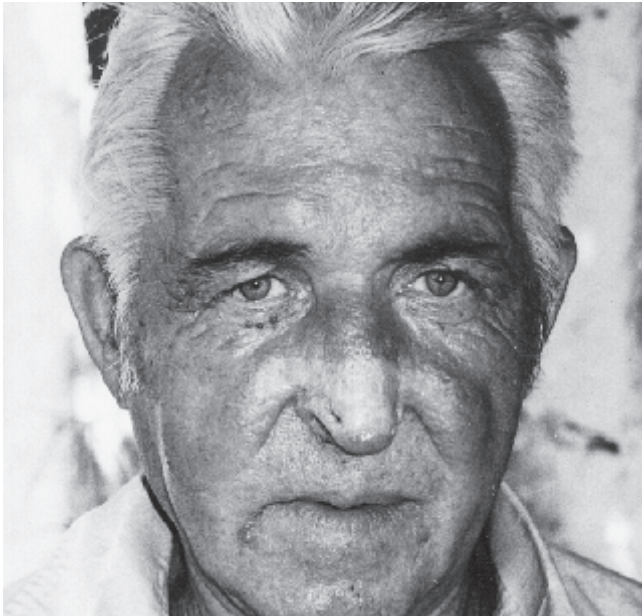


Figure 3.



Figure 4.

the blood. The patient smokes approximately one pack of cigarettes a day and drinks 1-2 L of beer a day.

Under local anaesthesia, the nose tumour was removed by using the electrosurgical knife, preserving the alar cartilage. The wound was dressed with Vaseline gauze daily. Two weeks after the surgery, wound epithelisation was completed and the patient was discharged with normal breathing. One year after surgery cosmetic and functional results were good (Figures 3 and 4). Gross 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 greatly increased fibrous tissue. There were teleangiectatic vessels throughout the structure, and marked lymphocytic inflammatory reaction. The sebaceous glands were increased in

size and number. There was cryptic invagination of the surface epithelium.

DISCUSSION

Rosacea is a frequent, multifactorial skin disease which occurs mostly in women with dry skin and much more rarely in men with greasy skin. In women, rosacea is heralded, around the age of 20, by intermittent facial erythema, and this is followed by the gradual development of permanent erythema with teleangiectasia and later on, around the fourth decade by papulopustules. In men, these successive stages are less frequent, but progressive dilatation of the nose due to sebaceous glands overgrowth may occur (Decauchy *et al.*, 1993).

A clinical study performed on 108 patients showed that sex incidence for rosacea was equal. The incidence peaked in the fourth and seventh decades of life. In the same group rhinophyma was present in 15 patients, mostly men (Sibenge and Gawkrödger, 1992).

The duration of the disease of our patient was about 10 years. Similar data resulted from a study performed at the Mayo clinic, where the duration of the disease ranged from 1 to 20 years, and all patients with rhinophyma (n=30) were men (El Azhary *et al.*, 1991).

The racial incidence must also be considered. The disease is common among Caucasians as well as among American Negroes (Sibenge and Gawkrödger, 1992). In Japan, rhinophyma is an uncommon disease. Until 1994, only 20 rhinophyma cases had been reported in Japan (Furukawa *et al.*, 1994).

Many different therapeutic modalities have been reported in the literature, each with reasonable success. As a method of choice we used the electrosurgical knife with good results both immediately and later on. Therapeutic results obtained by conservative treatment were not satisfactory, while, a combination of surgical removal of the skin changes and oral treatment with isotretinoin achieved good results (Sorhage and Glowania, 1991). Today various surgical methods are used to treat rhinophyma.

The carbon dioxide (CO₂) laser is useful for treating disorders of the skin surface texture and topography. Improved laser therapy is possible by pulses short enough to prevent heat transfer to the surrounding tissue (Goodman *et al.*, 1996). Patients with minor and moderate rhinophyma are treated with CO₂ laser vaporisation only, whereas patients with major rhinophyma are treated sequentially with CO₂ laser excision and vaporisation (El Azhry *et al.*, 1991). Most reports on use of CO₂ laser have good to excellent results. By means of this technique, restoration of normal function and excellent cosmetic results are possible without complications (Haas and Wheeland, 1990; Sinclair and Sinclair, 1991; Kasler *et al.*, 1991; Marsili *et al.*, 1993). The Nd:YAG laser gives even better results, but experiences are presently limited (Wenig and Weingarten, 1993; Lim, 1994). A new approach to the problem is a combination of razor blade and the argon beam coagulator. This modality is found to be relatively simple and less traumatic than other techniques (Stucker *et al.*, 1993).

The results of CO₂ laser vs. "cold" or electrosurgery techniques in the treatment of rhinophyma are different. Although the results were comparably good, the CO₂ laser proved to be a high cost treatment, more time-consuming and less convenient as compared to electrosurgery (Clark and Hanke, 1990; Gjuric and Rettinger, 1993). However, there is no difference in duration of surgery using CO₂ laser vs. "cold" techniques (Har El et al., 1993), although the expenses are much lower when using "cold" techniques (Grabski et al., 1990). Some authors used external rhinoplasty as an accepted technique in the treatment of rhinophyma (Rees, 1991; Peck et al., 1996).

Rhinophyma may present with either of two distinct histopathologic appearances. The most common one shows histopathologic features of rosacea. The second pattern shows telangiectasia, fibrous tissue and diffuse inflammatory reaction (Tope and Sanqueza 1994). The histopathologic feature of our patient's rhinophyma shows the histopathologic appearance of rosacea.

The histologic examination of rhinophyma is important because of possible development (or association) with carcinoma (Ros and Davies, 1992; Plenk, 1995).

REFERENCES

1. Clark DP, Hanke CW (1990) Electrosurgical treatment of rhinophyma. *J Am Acad Dermatol* 22 (5 Pt 1): 831-837.
2. Decauchy F, Beauvais L, Meunier L, Meynadier J (1993) Rosacea. *Rev Prat* 43 (18): 2344-2348.
3. El Azhary RA, Roenigk RK, Wang TD (1991) Spectrum of results after treatment of rhinophyma with carbon dioxide laser. *Mayo Clin Proc* 66 (9): 899-905.
4. Furukawa M, Kanetou K, Hamada T (1994) Rhinophyma in Japan. *Int J Dermatol* 33(1): 35-37.
5. Gjuric M, Rettinger G (1993) Comparison of carbon dioxide laser and electrosurgery in the treatment of rhinophyma. *Rhinology* 31 (1): 37-39.
6. Goodman GJ, Bekhor PS, Richards SW (1996) Update on lasers in dermatology. *Med J Aust* 164(11): 681-686.
7. Grabski WJ, Salasche SJ, Mulvaney MJ (1990) Razor-blade surgery. *J Dermatol Surg Oncol* 16 (12) 1121-1126.
8. Haas A, Wheeland RG (1990) Treatment of massive rhinophyma with the carbon dioxide laser. *J Dermatol Surg Oncol* 16: 645-649.
9. Har El G, Shaoshay SM, Bohigian RK, Krespi YP, Lucente FE (1993) The treatment of rhinophyma. "Cold" vs. laser techniques. *Arch Otolaryngol Head Neck Surg* 119: 628-631.
10. Kasler M, Gaspar L, Polus K, Ivanyi E, Banhidy F (1991) CO₂ laser surgery of rhinophyma. *Orv Hetil* 132: 2667-2668.
11. Lim RY (1994) Contact Nd:YAG laser excision of rhinophyma. *W V Med J* 90: 62 63.
12. Marsili M, Cockerell CJ, Lyde CB (1993) Hemangioma-associated rhinophyma. Report of case with successful treatment using carbon dioxide laser surgery. *J Dermatol Surg Oncol* 19: 206-212.
13. Peck GC jr, Michelson LN, Peck GC (1996) The external shaving technique in aesthetic rhinoplasty. *Plast Reconstr Surg* 97: 33-39.
14. Plenk HP (1995) Rhinophyma, associated with carcinoma, treated successfully with radiation. *Plast Reconstr Surg* 95: 559-562.
15. Reese BR, Koltai PJ, Parnes SM, Decker JW (1992) The external rhinoplasty approach for rhinologic surgery. *Ear Nose Throat J* 71: 408-412.
16. Ross DA, Davies MP (1992) Squamous cell carcinoma arising in rhinophyma. *J R Soc Med* 85: 236-237.
17. Sibenge S, Gawkrödger DJ (1992) Rosacea: a study of clinical patterns blood flow, and the role of Dermodex folliculorum. *J Am Acad Dermatol* 26: 590-593.
18. Sinclair RJ, Sinclair PJ (1991) Carbon Dioxide laser in the treatment of cutaneous disorders. *Australas J Dermatol* 32: 165-171.
19. Sorhage B, Glowania HJ (1991) Rhinophyma - conservative or surgical treatment? *Fortschr Med* 109: 110-112.
20. Stucker FJ, Hoasjoe DK, Aarstad RF (1993) Rhinophyma: a new approach to hemostasis. *Ann Otol Rhinol Laryngol* 102: 925-929.
21. Tope WD, Sanqueza OP (1994) Rhinophyma's fibrous variant. Histopathology and immunohistochemistry. *Am J Dermatopathol* 16: 307-310.
22. Wenig BL, Weingarten RT (1993) Excision of rhinophyma with Nd:YAG laser: a new technique. *Laryngoscope* 103: 101-103.

Goran Račić
Njegoseva 11
HR-21000 Split, Croatia