



RHINOPHYMA – SURGICAL EFFICACY

Rhinophyma – skuteczność leczenia chirurgicznego



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Abstract

Rhinophyma is a rare form of rosacea leading to nasal deformation and deterioration in the patient's quality of life. This article presents a clinical case of a 70-year-old patient with advanced rhinophyma, who presented with nasal redness, thickening, and deformation, significantly affecting his social and psychological functioning. After a thorough clinical assessment, surgical removal of the excessively thickened nasal tissue was decided upon. Following the surgery, the patient achieved significant improvement in facial aesthetics and experienced a reduction in respiratory symptoms. Surgical treatment of rhinophyma can be an effective therapeutic method in cases of advanced nasal changes, contributing to an improvement in the quality of life and satisfaction with appearance.

Streszczenie

Rhinophyma jest rzadką formą trądziku różowatego, prowadzącą do deformacji nosa i pogorszenia jakości życia. W artykule przedstawiono przypadek kliniczny 70-letniego pacjenta z zaawansowaną guzowatością, który zgłosił się z zaczerwienieniem, zgrubieniem i deformacją nosa, które znacznie wpływały na jego funkcjonowanie społeczne i psychologiczne. Po wnikliwej ocenie klinicznej zdecydowano się na chirurgiczne usunięcie nadmiernie zgrubiałej tkanki. Po operacji pacjent osiągnął znaczną poprawę estetyki twarzoczaszki oraz redukcję objawów ze strony układu oddechowego. Leczenie chirurgiczne *rhinophyma* może być skuteczną metodą terapeutyczną w przypadkach zaawansowanych zmian nosa, przyczyniającą się do poprawy jakości życia i zadowolenia z wyglądu.

Keywords: rosacea; reconstructive surgery; rhinophyma

Słowa kluczowe: trądzik różowaty; chirurgia rekonstrukcyjna; *rhinophyma*

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Introduction

Rhinophyma, or nasal tuberosity, is a variant of rosacea characterised by abnormal growth of nasal tissue and progressive hypertrophy. The disease manifests with proliferation of sebaceous glands, connective tissue and blood vessels, leading to nasal thickening and deformity [1]. In the early stages of the disease, redness and a few small nodules appear on the nose. Over time, the nose becomes increasingly enlarged and bulbous. The affected skin is stretched, with prominent pores and scars. This results in nasal deformation and, consequently, physical and mental discomfort for patients.

Rhinophyma typically affects middle-aged to elderly men, mainly Caucasian [2]. Its aetiology ranges from aggravation of rosacea to intracellular oedema of the skin due to immune-mediated vasodilatation. There is also empirical evidence to support increased hypertrophy following alcohol or caffeine consumption and in the presence of the skin mite *Demodex folliculorum* [3]. The diagnosis is based primarily on clinical examination, with diagnostic confirmation of collected specimens by histology. Microscopic examination shows thickening of the dermis and epidermis and hypertrophy of the sebaceous glands. An associated inflammatory infiltration, consisting of lymphocytes, plasma cells and Lang-

hans-type multinucleated giant cells, is also observed. A thorough histopathological diagnosis is necessary to confirm or exclude basal cell carcinoma (BCC), which is found in 3–10% of rhinophyma cases [4].

Surgery is the most effective treatment for advanced nasal tuberosity. Among the many invasive techniques available, it is worth mentioning the classical surgical methods, such as reducing or removing nodules with a scalpel, with simultaneous wound coverage with a free skin flap or a split-thickness skin graft.

This paper presents a case report of a patient with rhinophyma who underwent surgical intervention to improve nasal aesthetics and quality of life.

Case report

A 70-year-old man presented to the Department of Plastic and Reconstructive Surgery and Burns Treatment with prominent symptoms of rhinophyma, which were significantly affecting his psychological and social well-being and causing difficulty in breathing through nose (fig. 1). After a thorough clinical examination and assessment of the patient's condition, a decision was made to perform a surgery to remove the excess nasal tissue. Preoperatively, the skin area was locally anaesthetised with a 1% lidocaine solution.

The procedure started with the removal of the nodules on the dorsum of the nose, with a depth of excision of approximately 1 mm. Analogous procedures were then performed on the nasal alae. The key element was to remove the layers precisely and symmetrically in order to ultimately achieve the desired shape of the nose and to prevent cartilage exposure on the dorsum and iatrogenic perforation of the nasal cavity. Blood vessels were closed by electrocoagulation and intraoperative specimens were sent to the laboratory for histopathological examination. After complete removal of all layers of deformity and restoring nasal symmetry, an intermediate-thickness skin graft (0.3 mm), which was collected intraoperatively from the anterior surface of the thigh using a dermatome, was applied (fig. 2). The first postoperative follow-up (2 days after surgery) showed a reduction in nasal size and redness (fig. 3). One week later, during another follow-up visit, the sutures were removed, confirming normal wound healing and graft acceptance. One month after surgery, the operated area was found to be completely healed, with no visible postoperative marks, and the natural shape of the nose was restored.

Postoperatively, the patient quickly regained full activity. After a few weeks, there was a marked improvement in nasal aesthetics and increased patient satisfaction with the treatment outcomes.

Discussion

Various therapeutic approaches may be used for nasal tuberosity. However, despite further development of the available technologies, there is still no consensus on which technique is most optimal. Oral isotretinoin has been shown to be effective in reducing nasal redness and sebaceous gland hypertrophy. CO₂ and Nd:YAG lasers



Figure 1. Patient directly before surgery



Figure 2. Patient directly after surgery



Figure 3. Postoperative control 2 days after surgery

are a commonly chosen strategy for thickened nasal skin as the laser beam effectively reduces nodules and thickenings [5]. Dermabrasion, i.e., mechanical removal of the upper layers of the skin, is another treatment option. However, it is important to note that this therapy carries the risk of excessive bleeding in the treated area and may lead to scarring. Electrosurgery and electrocautery are also commonly used treatment methods that employ high-frequency electrical current to remove excess nasal tissue.

The Versajet system is one of the latest techniques in the treatment of rhinophyma. This device, which utilises a high-speed stream of sterile saline, allows for controlled tissue excision, while simultaneously sucking up the remains of tissue already excised to maintain a clean surgical field [6].

In the case of our patient, a decision was made to perform surgical treatment due to significant disease progression. Additionally, surgical approach offered the greatest chance for radical treatment of the lesion and allowed for later histopathological diagnosis for the presence of malignancy, which is not always possible with other therapeutic methods.

Surgical management of rhinophyma often yields permanent outcomes, unlike other methods that may require regularly repeated follow-up procedures. Mechanical removal of hypertrophied nasal tissue allows for satisfactory cosmetic outcomes by restoring natural nasal appearance, and minimizes potential complications in the surrounding tissue.

Conclusions

The use of a surgical technique to treat rhinophyma in this particular patient proved effective, yielding the desired aesthetic outcome and improving the quality of life. The split-thickness graft provided a very good cosmetic outcome, satisfactory for both the patient and the surgeon.

It should be emphasised that each patient with rhinophyma requires an individual approach and assessment, with the choice of treatment strategy tailored to the needs and capabilities of the patient. The presented case confirms the efficacy of surgical treatment of rhinophyma and emphasises the importance of an interdisciplinary approach to the diagnosis and treatment of this condition in order to achieve optimal therapeutic outcomes.

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