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Surgical Management of Moderate Rhinophyma with Nasal Nodules: An Electrosurgery Approach

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Abstract **Case Report**

***Introduction*:** Rhinophyma, a severe manifestation of rosacea, is characterized by hypertrophy of sebaceous glands and fibrosis of the nose, often leading to significant aesthetic and functional impairments. Surgical treatment is the preferred approach for advanced cases to restore nasal appearance and function. ***Case Report*:** We present the case of a 60-year-old man with moderate rhinophyma and nodules on the nostrils. Surgical management under local anesthesia involved the use of thermal loops for excision of the lesions and bipolar electrosurgery for hemostasis. The patient was also treated for rosacea with topical agents, including metronidazole and azelaic acid, and oral doxycycline for inflammatory lesions. Directed healing followed the surgery, along with LED phototherapy and ablative erbium laser sessions to optimize results. ***Discussion*:** The use of thermal loops and electrosurgery allowed for precise excision and control of bleeding. Postoperative care, including daily greasy vaseline dressings, facilitated rapid healing. Mild infection at the excision sites was treated with topical and prophylactic antibiotics. Six sessions of LED therapy combining four types of light (infrared, red, yellow, and blue) improved healing and reduced inflammation. Ablative erbium laser was proposed to further enhance the aesthetic outcome. ***Conclusion*:** A combined surgical approach and careful postoperative management yielded satisfactory results in the treatment of rhinophyma.

Keywords: Rhinophyma, Surgical Management, LED Therapy, Ablative Laser, Local Anesthesia, Electrosurgery.

INTRODUCTION

Rhinophyma is a rare and progressive condition commonly seen in middle-aged to elderly men with rosacea. It is characterized by the hypertrophy of sebaceous glands and fibrosis of the nasal skin, leading to distortion of nasal contours [1]. Advanced cases may cause nasal airway obstruction and recurrent infections, necessitating surgical intervention [2]. This case presents a 60-year-old patient with moderate rhinophyma, treated with thermal loops and bipolar electrosurgery under local anesthesia.

CASE REPORT

A 60-year-old male patient presented with moderate rhinophyma and nodules on the nostrils (Figure 1). After clinical and dermatological evaluation, surgical excision under local aesthesia was chosen. The hypertrophic lesions were excised using thermal loops, while bipolar electrosurgery was employed for hemostasis (Figure 2) [3]. Postoperative care included directed healing with daily greasy vaseline dressings to maintain moisture and promote regeneration.

Figure 1: Clinical image showing visible nodules on the nostrils

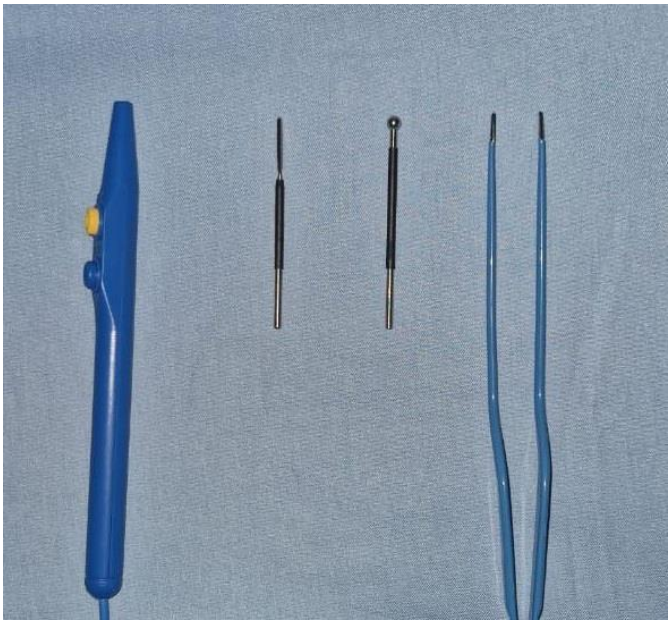

Figure 2: Image showing the electrosurgery equipment used, including the ball electrode, straight electrode, and bipolar electrode

Following surgery, the patient was treated for rosacea with topical metronidazole and azelaic acid, and oral doxycycline to control inflammatory lesions. Three weeks post-surgery, complete epidermization was observed, although a mild infection occurred at the excision sites (Figure 3). This was managed with topical antibiotics and prophylactic oral antibiotics [4].

Figure 3: Clinical image showing mild infection at the excision sites

The patient was referred to the dermatology department for six sessions of LED (light-emitting diode) therapy, combining infrared (8J/cm²), red (12J/cm²), yellow (24J/cm²), and blue (6J/cm²) light to accelerate healing, reduce inflammation, and enhance tissue repair. This regimen was accompanied by strict photoprotection and hygiene measures. To further optimize the results, an ablative erbium laser treatment was proposed (Figure 2), targeting residual nasal irregularities and improving the aesthetic outcome (Figure 4) [5].

Figure 4: Clinical image showing a significant improvement in the final aesthetic appearance of the nose

DISCUSSION

Managing moderate rhinophyma requires a multidisciplinary approach, integrating both surgical and dermatological interventions. In this case, thermal loops allowed precise excision of hypertrophic nasal tissues, preserving surrounding structures, while bipolar electrosurgery effectively controlled bleeding, reducing the risk of postoperative hemorrhage [6]. These methods are increasingly employed for their precision and minimal invasiveness in rhinophyma management [7].

Postoperative care, including the use of greasy vaseline dressings, ensured a moist healing environment conducive to rapid and uniform epithelialization. Daily wound care helped mitigate complications such as infection or hypertrophic scarring [8]. In this case, a mild infection was effectively managed with topical antibiotics and prophylactic oral antibiotics, ensuring smooth healing without delaying recovery [9].

Complementary dermatological treatments, such as LED therapy, play a significant role in enhancing postoperative results. LED therapy promotes cellular regeneration and inflammation reduction through multi-spectrum light application. The combination of infrared, red, yellow, and blue light wavelengths helps accelerate tissue healing and reduce erythema [10]. Recent studies support the effectiveness of LED therapy in post-surgical care, particularly in reducing inflammation and promoting dermal healing [11].

To optimize the final cosmetic result, the patient was proposed ablative erbium laser treatment. This laser targets deeper tissue irregularities and is widely used to smooth and refine skin texture after rhinophyma surgery [12]. The use of this laser in combination with LED therapy and topical treatments demonstrates the importance of a comprehensive, stepwise approach to achieving superior outcomes.

Strict photoprotection is essential post-surgery, particularly for the delicate nasal skin, to prevent post-inflammatory hyperpigmentation and dyschromic scarring. The patient was advised to use a broad-spectrum sunscreen to minimize the risk of UV-induced skin damage [13].

CONCLUSION

The combined use of thermal loops and bipolar electrosurgery, followed by comprehensive postoperative care with LED therapy and ablative erbium laser, provides an effective approach to rhinophyma management. This case highlights the importance of individualized, multidisciplinary treatment strategies to achieve optimal functional and aesthetic results. Further studies and long-term follow-ups are needed to assess the efficacy of such protocols in improving patient outcomes.

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