

Rhinophyma Causing Feeding Difficulty- A Rare Case Report with Review of Literature

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ABSTRACT

Rhinophyma is a rare chronic progressive disease of phymatous type of rosacea and commonly affects males in their fifth to seventh decades. Diagnosis is based on clinical features. It commonly results in cosmetic deformities; however rarely functional issues have been reported like nasal obstruction and feeding difficulty. Medical treatment is usually ineffective in reducing the size of rhinophyma and moderate and severe cases of rhinophyma give reasonably good results to surgical intervention using different modalities. We report a rare case of rhinophyma in a 72-year-old male with an unusual presentation of a large rhinophyma with a long hanging tumorous tip presenting with functional issues including partial nasal obstruction and feeding difficulty especially liquids from a cup of glass for which he was adamant to get it operated. Tumor was successfully removed with electrosurgical knife combined with excision and primary repair of nodular growth at the lower end to the satisfaction of the patient. This case highlights that rhinophyma can rarely enlarge in a way that it can result in feeding difficulty posing a challenge in management. The relevant literature is discussed.

Key Words: Acne, Feeding difficulty, Phymatous rosacea, Rhinophyma

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Introduction

Rhinophyma is a Greek word (rhis: nose, phyma: growth) first coined by von Hebra in 1856.¹ It is a chronic progressive disease, a manifestation of phymatous subtype of acne rosacea.² Though rosacea shows a near equal gender distribution, however rhinophyma is more common in Caucasian males, in their fifth to seventh decades of life.³ Diagnosis is based on clinical findings using Rhinophyma Severity Index Score (RHIS).⁴ This subtype of acne rosacea initially shows swelling and prominence of follicular pores with patulous follicles however, in advanced cases there is skin thickening along with hyperemia and irregular nodularities, representing hypertrophy of sebaceous gland and finally distortion of

shape of the nose occurs.⁵ The exact pathogenesis of rhinophyma and rosacea is still uncertain.

Medical treatment is usually ineffective in reducing the size of rhinophyma and reasonably good results are obtained from surgical excision, electro-cautery excision, cryo-excision and laser therapy in moderate and severe cases.^{6,7} We, present an unusual rare case of large rhinophyma in a 72-year-old male with a number of Co morbidities and having functional issues specially feeding difficulty causing embarrassment, for which patient demanded surgical intervention. Literature review reveals only a few cases of rhinophyma resulting in functional issues.^{8,9} The objective of this case report is to highlight

the fact that deformities caused by rhinophyma may result in functional issues like breathing and feeding difficulties as well as embarrassment due to feeding difficulties. Reduction of tumorous growth is the treatment of choice in such cases, which may be accomplished with surgical, electrocautery and other modalities or a combination of the modalities.

Case Reports

A 72-year-old male, a known case rhinophyma with diabetes mellitus, hypertension and reduced renal function, presented to the Otolaryngology outpatient with recurrence of rhinophyma following electrocautery excision 5 years back. He reported painless slowly growing swelling on the nose so much so that now the nose appeared grossly enlarged with a long hanging tumorous tip. For the last six months' patient had started having functional issues with slight difficulty breathing and difficulty taking food especially difficulty to drink liquids from a cup of glass. This caused him alot of embarrassment due to the fact, which his nose would always dip into the liquid food while drinking and made the patient sought surgical intervention. His personal history was insignificant except that he was a smoker taking 2-3 packs a day for the last 40 years. Examination revealed a grossly enlarged nose especially the lower part and the nasal tip reaching up to the margin of the upper lip revealing nodular surface and growth with soft lobulated skin colored nodules with some overlying dilated pores encompassing the entire lower part of nose especially tip and right nasal ala compressing the right nares (Figure 1).



Figure 1: Preoperative photographs showing a) Lateral view b) inferior view and c) Anterior View

The left nasal ala was not much affected. On examination of the remainder of his face, his bilateral cheeks showed sebaceous skin with multiple scattered dilated pores and open comedones. No palpable lymphadenopathy was found. Systemic examination also revealed a blood pressure of 190/100 mm Hg. Laboratory analysis revealed a blood sugar ranging from 200 to 400 mg/dl with a blood urea level of 40 to 60 mg/dl and creatinine 1.8 to 2.5 mg/dl.

With the difficulty in taking food, the patient was adamant to get himself operated. Due to age and with comorbidities like diabetes mellitus, hypertension, renal issues, patient was a high-risk case for general anesthesia being ASA III, therefore he was offered surgery under local anesthesia. Keeping in view the increased nasal tip length the nasal tumor was removed with electrosurgical knife combined with excision and primary repair of nodular growth at the lower end, including nasal tip without the need of grafting. This resulted in patient's satisfaction with good post-operative evolution and re-epithelialization in 2 weeks with reasonable cosmetic and functional outcome, given the patient's age, and associated comorbidities (figure 2). The patient was later referred to dermatologist for medical treatment to prevent recurrence.



Figure 2: Post-operative Clinical photograph showing a) Lateral view 3 days' post op, b) Inferior view and c) 10 days' post op.

Discussion

Although prevalence of rosacea is estimated to range from 1% to 20%, it is highly prevalent in Germany (12.3%) and less prevalent in Russia (5%).¹⁰ The phymatous type is quite uncommon.¹¹ According to Sibenge and

Gawkrodger, 14% cases of rosacea suffer from rhinophyma.³ Rhinophyma is the most prevalent presentation of the type 3 rosacea (phymatous rosacea), others being gnathophyma, metophyma, otophyma and blepharophyma.¹² Rhinophyma is graded according to its severity. Grade 1 (mild) shows slight puffiness and patulous follicles, while Grade 2 (moderate) shows bulbous nasal swelling, moderately dilated patulous follicles with mild hypertrophy of glands or connective tissue and change in nasal contour. Grade 3 (severe variety) is characterized by marked nasal swelling, large dilated follicles, distortion of nasal contour due to hypertrophy and presence of nodular component and usually causes disfiguration of the nose.¹² Accordingly, our case was grade 3 severe varieties, which also resulted in increased length of the nasal tip that almost reached the upper lip margin. Severity of rhinophyma doesn't seem to be related to the duration of disease and other factors may be involved.¹³

Like rosacea, the pathogenesis of its phymatous stage is also obscure with a number of factors proposed.³ In severe cases of rhinophyma, the fibroplasia may block the lymphatic drainage leading to persistence of edema resulting in destruction of skin adnexal structures and production of glycosaminoglycans and collagen resulting in further fibrosis.¹³ Rosacea including Rhinophyma is usually diagnosed on clinical grounds using Rhinophyma Severity Index Score (RHISI).⁴ However, to rule out other causes, biopsy is warranted especially with rapid growth, ulceration, discharge and unilateral changes.^{5,14} It may be helpful in distinguishing atypical rhinophyma from conditions like lupus, malignancies like basal cell carcinoma, squamous cell carcinoma, lymphoma, angiosarcoma and even sebaceous carcinoma.^{15,16} Bandyopadhyay et al, diagnosed a case of cutaneous leishmaniasis presenting as rhinophyma using needle sampling technique.¹⁷

Usually seen histopathological findings include hyperplasia of sebaceous glands, abundance of sebum with dilatation of sebaceous ducts and dermal thickening with fibromatous changes. However according to Schuurman et al⁴, histopathological features do not correlate with clinical expression of rhinophyma. In contrast to rosacea where medical treatment is the treatment of choice including tetracycline and

metronidazole,^{14,18} surgeries is the gold standard for reduction of Rhinophyma.⁷ A number of options give fairly good results including surgical excision, electro-cautery excision, carbon dioxide (CO₂) laser^{6,19} and diode laser⁸. Excision and grafting has also been used for advanced rhinophyma especially with maximum RHISI score^{20,21}. High pre-operative RHISI score has been reported to be a risk factor for recurrence.⁴ According to Bogetti et al, scalpel in association with electrocautery along with local infiltration of diluted epinephrine was the safest method to save gland (sebaceous) fundi allowing scar free epithelialization.²² This method was safely and effectively used in our case along with excision of part of rhinophyma and primary repair. Even cases of rhinophyma with suspicious giant nodules may be treated with surgical excision taking safety margin especially in cases where benign or malignant nature of the tumor is not known.²⁰ Shave excision of rhinophyma under tumescent anesthesia control has also been reported to have high patient satisfaction.²³ Hassanein et al used a new novel subunit excisional approach to correct the severely deformed rhinophymatous nose.²⁴ Recently Ozkan et al, have advocated a new approach in which total deep excision of rhinophymatous tissue is done in a single session using plasma blade and covered with acellular dermal matrix for substitution of dermal tissue and split thickness skin grafting in single session preventing recurrence.²⁵ Kahn et al used excisional debulking and electrosurgery.²⁶ Yildiz et al has reported good results with Versajet Hydrosurgery System and autologous cell suspension with less complications and good wound healing.²⁷ Faris et al reported very good results with use of powered microdebrider.²⁸

The peculiarity of the present case represented is that, it was large rhinophyma resulting in functional issues of partial obstruction of right nostril and the nasal tip length was such that the patient sought surgical intervention as he had difficulty in taking liquids with a glass or cup as his nasal tip would dip into liquid and caused him a lot of embarrassment. Following electrosurgical treatment combined with excision and primary repair of nodular growth at the lower end including nasal tip without the need of grafting resulted in good evolution and very short time of spontaneous epithelialization, given the patient's age, and associated comorbidities.

Conclusion

Rhinophyma needs surgical intervention mostly for aesthetic reasons, but definitely required for rare cases with functional issues like nasal obstruction or feeding issues. Excision of tumorous growth of nose and reduction using electrocautery can result in good functional outcome with primary wound healing and spontaneous epithelialization.

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