Original Article

Rhinophyma- A case series

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Abstract

Rhinophyma is a rare benign skin disease characterized by a progressive thickening of nasal skin which produces a disfiguring soft tissue hypertrophy of the nose.It is one of the end processes of severe rosacea and can be a debilitating, functional and psychosocial problem for patients. The diagnosis is mainly clinical with histopathology being confirmatory. Severe cosmetic deformity and impairment of breathing may coexist making surgical treatment of rhinophyma necessary. Various treatment modalities are available with partial tangential excision and allowing for spontaneous re-epithelisation being the treatment of choice, Here, we present a case series of 3 patients complaining of a mass over nose whose clinical features and histopathology showed it to be a rhinophyma and discuss the treatment of the same.

Keywords: Rhinophyma – nasal deformity; rosacea; sebaceous hyperplasia

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INTRODUCTION

Rhinophyma, Greek word(Rhino=nose,phyma=growth) the term was coined by Hebra in 1845.[1,2] Rhinophyma is a slowly progressive, benign, disfiguring disease of the nose characterized by hypertrophy of soft tissues of nose and hyperplasia and hypertrophy of sebaceous glands.[6] It has a M:F ratio of 12:1 to 30:1[5], common after 50 years of age[2] and common in white race.[5] The exact etiology of rhinophymais unknown. However it is considered as the fourth stage of rosacea with the preceding stages being prerosacea, vascular rosacea and inflammatory rosacea (ache rosacea) as described by Rebora.[19] other factors incriminated is presence of skin mite demodexfolliculorum[3] by Ayers and Anderson, excess of androgens[7] and vitamin deficiencies.[8] in past it was also linked to alcoholism[5] Mechanism of rhinophyma is considered to be vascular instability in the skin which results in loss of fluid into the dermal interstitium and matrix initiating inflammation and fibrosis.[11] Histopathologically, two forms of rhinophyma are there, the most common one is characterized by hyperplasia of dermis and sebaceous glands with cystic dilatation of sebaceous ducts and they become filled with sebum and keratin with presence of lymphocyte infiltrates and second one is fibrous variant in which there is severe fibrosis in the dermis and decrease in sebaceous glands and dermal annexes.[18] Morphologically, it is characterized by erythematous, hypertrophied nasal skin with telengiectasias and in severe cases with presence of pits, fissures ,scarring and nodularity.[1]Mainly it involves the nasal tip and alae, but dorsum and lateral walls may also be involved to a lesser degree. The aesthetic subunit of the nose is merged and obliterated. The osteocartilagenous frameworks are usually unaffected, patients often suffer from secondary nasal airway obstruction at the external nasal valves.[17]

Freeman classified rhinophyma into 5 types depending on the severity of deformity as

i. Early vascular type
ii. Diffuse enlargement – moderate
iii. Localized tumor – early
iv. Diffuse enlargement – extensive
v. Diffuse enlargement extensive with localized tumour[13]

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Rhinophyma results in a bulbous cosmetic deformity of the nose and has a malignant potential of 3 -10% for occult basal cell carcinoma, Also other types of skin cancers and systemic malignancies have been formed to mimic rhinophyma.[4]

Preoperative view

Postoperative view

CASE REPORTS

1) A 54 years old male patient came to our OPD with complaint of 2 years of slowly enlarging nasal deformity and difficulty in breathing through both nares. The patient was chronic alcoholic, there was no family history of similar disease. On examination a pink, lobulated, mass of approx. 5*4*3 cm^3 was present with superficial vascular dilatation over tip of nose extending to columella and alae with narrowing of both the external nares, anterior rhinoscopy and diagnostic nasal endoscopy were done which were found to be normal, oral and ear examination were also normal. The diagnosis of rhinophyma was established on clinical basis and to confirm it, a biopsy was performed, which was suggestive of rhinophyma. Under general anaesthesia, the rhinophymatous mass was partly excised with preservation of the cartilages, perichondrium and periosteum and it was allowed to heal by secondary intention, preoperatively and postoperatively, antibiotics were given. At 2 months postoperatively, our patient showed complete healing of the lesion, the nasal skin nodularity was corrected, the nasal dorsum, columella and tip had restored smooth contour and the nasal airway obstruction was relieved.

2) A 56 years old male patient presented to us with a mass over his nose since 4 years which was slowly progressive and he also had difficulty in breathing through nose. On examination, a 4*4*3 cm^3 lobulated and firm mass was present on tip of nose and anterior rhinoscopy was found to be normal. Patient was diagnosed as rhinophyma and treated same as above. Patient had a good postoperative outcome with no complication.

3) A 40 years old man with history of chronic rosacea presented with gradually progressive enlargement of his nose since last 2 years and was taking medical treatment for the same since last 3 months. Patient was diagnosed as rhinophyma on clinical basis and histopathological examination of biopsy from the mass, and was treated in the same manner as above. Patient had a significant improvement cosmetically and in nasal breathing without any complication.

DISCUSSION

Patient with rosacea and early rhinophyma consisting of minimal skin thickening without nasal deformity may benefit from topical and oral antibiotics and retinoids.[5] In established cases of rhinophyma the treatment is surgical. Two methods are available. The first is complete excision

of the tumor with primary closure for small lesions or skin grafting for large lesions, split thickness or a full thickness graft can be used, the latter being preferable to achieve the best aesthetic result.[12] Alternatively, rhinophyma may be treated by partial tangential excision(incomplete excision) of the hypertrophic skin sequentially until the desired nasal size and shape is achieved followed by re – epithelisation from the remaining glandular epithelium. The methods of incomplete excision include dermabrasion,[5,10] sharp blade excision, shaving with razor or scalpel, electrocautery,[15] cryosurgery, ultrasonic scalpel[14] and laser surgery.[16] recently x-ray therapy has also been used to treat rhinophyma successfully.[9] Except for Laser, all methods of incomplete excision have some drawbacks, including excessive blood loss and poor visualization .With Laser, there is decreased bleeding and post – opperative pain.[16] During surgery the osteocartilagenous framework of the nose should be preserved.

CONCLUSION

Rhinophyma which is a benign soft tissue hypertrophy of the nose, requires surgical treatment in most cases and can be successfully treated by partial excision following healing by secondary intention and the result is cosmetically good outcome.

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