

## Case Series

# Rhinophyma: Surgical Management in Central South High Specialty Hospital of Pemex in Mexico City

Rojas-Garcia Priscila<sup>1\*</sup>, Barrera-Garcia Gabriel<sup>1</sup>, Cuervo-Vergara Marco Antonio<sup>1</sup>, Gutierrez-Salgado Jorge Eduardo<sup>1</sup>, Marquez-Espriella Cuahutemoc<sup>2</sup>, Kajomovitz Bialostozky Daniel<sup>1</sup> and Euan Vázquez Cynthia Ivette<sup>1</sup>

<sup>1</sup>Central South High Specialty Hospital of Pemex, Mexico

<sup>2</sup>Abc Medical Center, Mexico

\*Corresponding Author: Rojas Garcia Priscila, Central South High Specialty Hospital of Pemex, Mexico.  
E-mail : [rojas.priscila@gmail.com](mailto:rojas.priscila@gmail.com)

Received Date: 14 November, 2018; Accepted Date: 21 January, 2019; Published Date: 29 January, 2019

## Summary

The term rhinophyma is derived from the greek: “*rhinis*” = nose and “*phyma*” = growth. Rhinophyma is a skin deformity characterized by benign and slowly progressive nose growth condition due to hypertrophy of the sebaceous glands that can cause important morphologic changes. Evidence has revealed that this condition predominantly affects caucasian males between the 5th and the 7th decade. No specific cause has been directly associated, being considered as a multifactorial disease. Although etiology remains unknown, it may be classified as an end-staged or stage IV also known as fimatous rosacea. Rhinophyma is diagnosed on a clinical basis, signs include chronic edema, local inflammation, hyperplasia and fibrosis of the sebaceous glands and dermis that lead to the characteristic irregular lobulated thickening of the skin nose. Surgery is considered the ideal treatment of this disease. There are many other nonsurgical treatments described for mild to severe cases, however, surgical resection is the best alternative for an optimal result. Nowadays there is no surgical technique considered the gold standard. The goal of our paper is to describe the surgical and reconstructive management of patients with rhinophyma treated in the Central South and High Specialty Hospital of PEMEX in Mexico City. A total of 8 patients underwent surgery with looped electrosurgical tangential excision followed by sand paper polish for surface smoothing and finally wound coverage by using in vitro-cultivated allogenic human keratinocytes dressings. The procedure was made as an outpatient surgery with no complications and achieving excellent functional and aesthetics outcomes.

## Keywords

Cultivated keratinocytes; nose reconstruction; rhinophyma; osacea nose deformity; tangential excision

## Introduction

The word Rhinophyma is derived from the greek: “*rhinis*” = nose and “*phyma*” = growth. Rhinophyma is a skin deformity characterized by a benign and slowly progressive nose growth condition due to hypertrophy of the sebaceous glands that can cause important morphologic changes. [1,2,3]

Evidence has revealed that this condition predominantly affects caucasian males between the 5th and the 7th decade, with a 12-30:1 male:female ratio. [1,2,4] Rhinophyma is presented as a long-standing acne rosacea and is considered as an end-staged or stage IV, also known as phymatous rosacea. [1,2] The prevalence reported ranged from 3.7% and is most frequent in western Scotland. [2]

The etiology of rhinophyma has not been clearly established, reasonably being considered as a multifactorial disease that leads to uncontrolled superficial vasodilatation which favors chronic edema of dermal interstisium, local inflammation, fibrosis and hyperplasia of the sebaceous glands and dermis. [1-9] In the past, it was considered to be associated with alcohol consumption, but there is no strong evidence that confirms that hypothesis. [1] Together, all these inflammatory phenomena produce the characteristic presentation of this particular pathology hence a clinical diagnosis can be made. Surgical excision is the mainstream

of treatment. [2,4] There are many other nonsurgical options in treatment from mild to severe cases, however, surgical resection is the best alternative for an optimal result. [1,8,12]

Our goal is to describe the surgical and reconstructive management of patients with rhinophyma treated in the Central South and High Specialty Hospital of PEMEX in Mexico City.

## Methods

(Including statistical methods, ethics guidelines followed for human and animal research and investigation, Research and Ethics Institutional Committees Approval if needed)

Patient medical records analysis was carried out. We included 8 patients diagnosed with rhinophyma. All of them underwent surgical excision and nasal reconstruction with the same technique, between 2010 and 2015 within Plastic and Reconstructive Division of Central South and High Specialty Hospital of PEMEX in Mexico City.

## Surgical Technique

The patient was placed in dorsal *decubitus* position and under sedation, antisepsia was carried out using povidone-iodine or chlorhexidine. Later on, the area was infiltrated with 2% Lidocaine with Epinephrine, always giving 7-8 minutes to allow latency of the local anesthetic. Tangential excision was performed using a loop monopolar electrocautery along the nose's skin using 25 mV cut mode till healthy tissue was identified followed by sand paper polish for surface smoothing and finally wound coverage by using cultivated keratinocytes dressing. (Figures 1-4)

The procedure was performed as an outpatient surgery with no complications. The patients were discharged as soon as the anesthetic effect concluded. We prescribed cephalosporin type prophylactic antibiotics and NSAID for analgesia. The surveillance was carried out in outpatient and the dressing was removed at 7<sup>th</sup> day post-op. Sunscreen block was recommended in order to avoid hyper pigmentation with 6 months last longing.

## Results

A total of 8 patients were included in this study. 5 of them were men and 2 women. We missed one patient that never showed up to the office after surgery. The mean age was 51.37 years old with age range of 44. (Table 1)

All the patients received the same treatment following the same surgical technique described previously using monopolar electrocautery, sand paper polish for surface smoothing and wound covering with cultured keratinocytes dressing.

The epithelization occurred in 5 weeks as maximum, the mean was 3.1 weeks and the mode was 4.

Only one patient required more than one resection (two) because of the large dimensions of his lesion. In that case, we preferred to perform a 2 staged treatment in order to reduce the risk of irrigation disruption and tissue necrosis.

One patient presented a malignant lesion associated, which was resected at first and sent to histopathology analysis. The result revealed basocellular carcinoma. It was completely excised with free disease margins. Afterwards, the surgical treatment for rhinophyma was done as explained.

None of our patients presented any complication or recurrence during a mean follow up of 16.5 weeks with range of 53 weeks. We missed only one patient that never came back to postop follow up.

## Discussion

Rhinophyma is a skin deformity characterized by benign and slowly progressive nose growth condition due to hypertrophy of the sebaceous glands that can cause important morphologic changes. [1,2,3]

As said before, the incidence of this condition is most frequently presented at 5<sup>th</sup> and 7<sup>th</sup> decade. [1,2,4] If that so, as we expected, our results showed a higher incidence in the 6<sup>th</sup> and 7<sup>th</sup> decade.

Patient	Age (yr)	Gender (M=Male,F=Female)	Complications	Recurrence	Wound Healing (wk)	Follow up (wk)
1	57	F	No	No	4	6
2	56	M	No	No	1	2
3	62	M	No	No	1	13
4	66	M	No	No	4	52
5	53	M	No	No	4	4
6	22	M	No	No	2	2
7	45	F	No	No	6	53
8	50	M	No	No	Lost patient	0

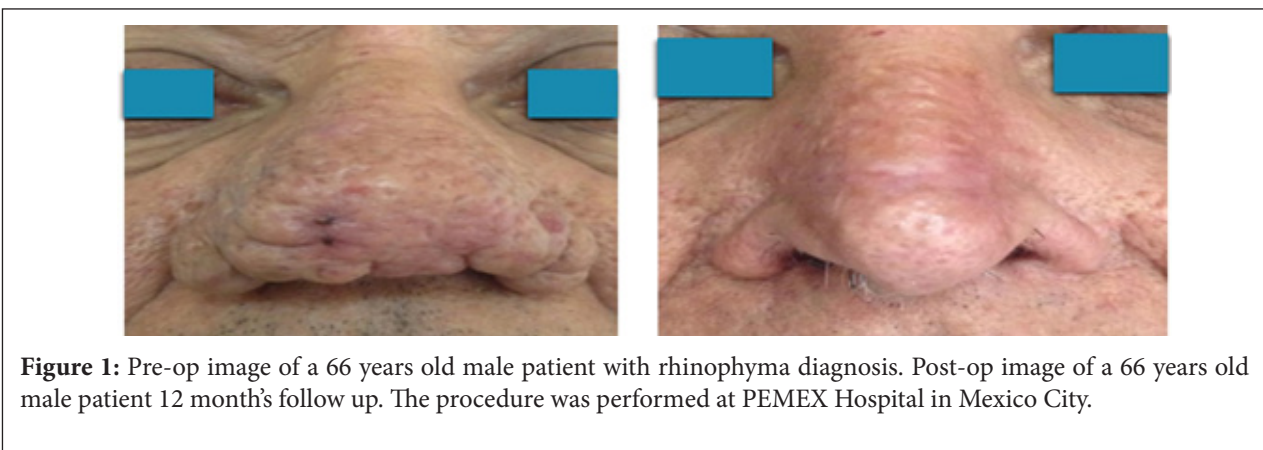
Table 1: Summary of postoperative results.

There are plenty of surgical options for treating this condition, however nowadays there is no gold standard treatment. There have been described non-surgical treatments such as: keratolytics (benzoyl peroxide or azelaic acid), local antibiotics (metronidazole), systemic antibiotics (metronidazole, erythromycin, tetracycline) and retinoids (Isotretinoin) [1-7] There are more aggressive and invasive techniques such as dermabrasion, surgical excision with cold scalpel or electrocutery, cryosurgery, electrocautery decortications or CO<sub>2</sub> laser exeresis. However, all of these options are described to be poorly effective in terms of reconstructive outcomes because of the high recurrence rates observed. Also, they may involve second intention wound healing which can lead to longer recovery, wound healing complications, expensive costs and unacceptable aesthetic outcomes.

With this technique, followed step by step at our institution described before in the literature, we can avoid the second intention wound healing by surface smoothing and regularization, gentle tissue manipulation plus cultured keratinocytes dressings. We provide to the patient an everlasting resection with functional and aesthetic reepithelization [13]. These favors the wound heal-

ing process, faster recovery and reduce post-op complications such as: poor healing, hypertrophic scarring, chronic wounds, skin contraction, infection and need of grafting.

A limitation in this study was the small number of subjects included, one possible cause may be that rhinophyma is a rare disease, with low worldwide incidence. We could extend the sample by developing a national request of patients diagnosed with rhinophyma that belong to our health system and treat them in our service.





**Figure 2:** Pre-op image of a 45 years old female patient with rhinophyma diagnosis. Post-op image of a 45 years old patient female 12 month 's followup. The procedure was performed at PEMEX Hospital in Mexico City.



**Figure 3:** Pre-op image of a 56 years old male patient with rhinophyma diagnosis. Post-op image of a 56 years old male patient 12 month 's follow up. The procedure was performed at PEMEX Hospital in Mexico City

## Conclusion

The surgical technique and management of patients with rhinophyma in our Medical Institution within Plastic and Reconstructive Division is a simple, practical, safe and reproducible technique. It provides a specialized coverage that allows adequate reepithelization avoiding second intention wound healing and the consequent deforming scars. This technique has become the mainstay treatment for patients that can present with deforming pathologies such as rhinophyma.

## References

1. Laun J, Gopman J, Elston JB, Harrington MA (2015) Rhinophyma. *Eplasty*, 15: ic25.
2. Troncoso A, Torrealba R, Bozán F, LazoA (2012) *Rev. Chilena de Cirugía* 64: 194-198.
3. Curnier A, Choudhary S (2002) Triple Approach to Rhinophyma. *Ann Plast Surg* 49: 211–214.
4. Sahin C, Turker M, Celasun B (2014) Giant Rhinophyma: Excision with coablation assisted surgery. *Indian J Plast Surg* 47: 450–452.
5. Payne W, Wang X, Walusimbi M, et al (2002) Further Evidence for the Role of Fibrosis in the Pathobiology

- 
- of Rhinophyma. *Ann Plast Surg* 48: 641–645.
6. Zide MF (2008) Surgical Removal of Rhinophyma. *J Oral Maxillofac Surg* 66: 2168-2177.
7. Sadick H, Goepel B, Bersch C *et al.* (2008) Rhinophyma: Diagnosis and Treatment Options for a Disfiguring Tumor of the Nose. *Ann Plas Surg* 61: 114–120.
8. Erisir F, Isildak H, Hacıyev Y (2009) Management of Mild to Moderate Rhinophyma With a Radiofrequency. *J Craniofac Surg* 20: 455-456.
9. Delikonstantinou I, Itte V, Frew Q, Muttardi E (2014)



**NORCAL**  
OPEN ACCESS PUBLICATIONS

submit your manuscripts at  
[www.norcaloa.com](http://www.norcaloa.com)