

Role of Histopathology in Differentiating Primary Atrophic Rhinitis from Atrophic Stage of Rhinoscleroma

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Abstract

Atrophic rhinitis (AR) is a chronic debilitating nasal mucosal disease of unknown aetiology and the definitive treatment is still elusive. This often leads to the patient suffering during the entire life span often depleting the individual psychologically. On the contrary, Rhinoscleroma (RS) for which the aetiology is clearly known and is completely curable has atrophic stage which is clinically indistinguishable from AR. Many cases of atrophic stage of RS are undetected and often they end up being treated as AR. This study was conducted to know the role of histopathology and other factors in differentiating AR and Atrophic stage of RS, which can significantly alter the course of treatment and outcome. Forty-five cases of clinically diagnosed AR were included in the study. Punch biopsy of nasal mucosa was obtained from the anterior

end of inferior turbinate. Core culture was performed on one sample and histopathological examination for the other sample. Among the 45 patients, 38 (84.44%) of cases were diagnosed to be AR and 7 (15.56%) cases were diagnosed to be RS by histopathology. Core culture of RS subjects showed positive culture for *Klebsiella rhinoscleromatis* in five subjects (71%). To conclude, AR cases should be confirmed by histopathological examination to rule out RS, for effective management and to prevent complications.

Keywords

Atrophic rhinitis Rhinoscleroma Histopathology

References

1. 1.
Anand CSAS (1972) A histopathological study in Atrophic rhinitis. *J Indian Med Assoc* 59(7):278–281 [PubMedGoogle Scholar](#)
2. 2.
Mehrotra RSJ, Kawatra M, Gupta SC, Mangal S (2005) Pre and post-treatment histopathological changes in Atrophic rhinitis. *Indian J Pathol Microbiol* 48(3):310–313 [PubMedGoogle Scholar](#)
3. 3.
Pattanaik S (2006) Interesting observations in primary Atrophic rhinitis. *Indian J Otolaryngol Head Neck Surg* 58(3):264–267 [PubMedPubMedCentralGoogle Scholar](#)
4. 4.
Datti PV (1974) Closure of nostril in Atrophic rhinitis. *Indian J Otolaryngol* 24(4):187–192 [Google Scholar](#)
5. 5.
Barbary AS, Yassin A, Fouad H (1970) Histopathological and histochemical studies on Atrophic rhinitis. *J Laryngol Otol* 84:1103–1112 [CrossRefGoogle Scholar](#)
6. 6.
Deshazo RD, Stringer SP (2011) Atrophic rhinosinusitis: progress toward explanation of an unsolved medical mystery. *Curr Opin Allergy Clin Immunol* 11(1):1–7 [CrossRefPubMedGoogle Scholar](#)
7. 7.
Nayak P, Pramod RC, Suresh KV, Desai D, Pandit S, Ingaleshwar PS (2015) Rhinoscleroma of nose extruding into oral cavity. *J Coll Phys Surg Pak* 25(11):S27–S29 [Google Scholar](#)

8. 8.

DiBartolomio JR (1976) Scleroma of the nose and pharynx. West J Med 124(1):13–17 [Google Scholar](#)

9. 9.

Bonacina E, Chianura L, Sberna M, Ortisi G, Gelosa G, Citterio A et al (2012) Rhinoscleroma in an immigrant from Egypt: a case report. J Travel Med 19(6):387–390 [CrossRefPubMedGoogle Scholar](#)

10. 10.

Eguia AI, Vicario GF (2010) Rhinoscleroma. Acta Otorrinolaringol Esp 61(2):160–162 [CrossRefGoogle Scholar](#)

11. 11.

August C, Hustert B (1998) Nasal scleroma (rhinoscleroma): pathological and clinical results. Pathologie 19(5):384–387 [CrossRefPubMedGoogle Scholar](#)

12. 12.

Kumari JO (2012) Coexistence of rhinoscleroma with Rosai-Dorfman disease: is Rhinoscleroma a cause of this disease? J Laryngol Otol 126(6):630–632 [CrossRefPubMedGoogle Scholar](#)

13. 13.

Tan SL, Neoh CY, Tan HH (2012) Rhinoscleroma: a case series. Singapore Med J 53(2):e24–e27 [PubMedGoogle Scholar](#)

14. 14.

Gaafar HA, Gaafar AH, Nour YA (2011) Rhinoscleroma: an updated experience through the last 10 years. Acta Otolaryngol 131(4):440–446 [CrossRefPubMedGoogle Scholar](#)

15. 15.

Balazs M, Elo J, Juhasz J (1975) Light and electron microscopy of Rhinoscleroma (author's transl). HNO 23(2):35–42 [PubMedGoogle Scholar](#)

16. 16.

Zhang S, Lu Z, Ni X, Zhang Y, Hong M (2000) An etiological and pathologic study of Rhinoscleroma. Zhonghua Bing Li Xue Za Zhi 29(6):421–423 [PubMedGoogle Scholar](#)