

Atrophic Rhinitis



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A 19-year-old woman presented with bilateral nasal obstruction and foul smell from the nose for 2 years. Examination revealed a roomy nasal cavity with shrinkage of turbinates and dried crusts (Figure 1). Tests to rule out tuberculosis, leprosy, and syphilis were negative and the culture from the crusts grew *Klebsiella ozaenae*. The patient was advised alkaline nasal douching with a combination of sodium chloride, sodium bicarbonate, and sodium baborate, and application of 25% glucose glycerine solution. Her symptoms improved and she is continuing the nasal irrigation at 4 months' follow-up.

Atrophic rhinitis is a chronic condition characterized by progressive atrophy of nasal mucosa and underlying bone of the turbinates. The presence of dried thick crusts, which emits a foul odor called ozaena (a stench), is characteristic. Although the condition is rare in western countries due to improved socioeconomic conditions, it is still a major problem in the Asian and African continent. The causative agent for primary atrophic rhinitis is *K. ozaenae*; however, *Proteus vulgaris*, *Escherichia coli*, Diphtheroids, and so on have also been seen. Other contributing factors are heredity (familial tendency), endocrinal disturbance (more common in females and starts during puberty), nutritional deficiency (especially iron and vitamin D), or autoimmune process. It is usually seen from the second to sixth decade of life and is common in females. Patients present with nasal obstruction, anosmia, epistaxis, and fetor. The diagnosis is clinical and the prominent findings are nasal crusts filling the entire nasal cavity, foeter, and increased volume of the nasal cavity due to shrinkage of turbinates. The goal of treatment is to restore nasal hydration and minimize crusting and debris. The most common

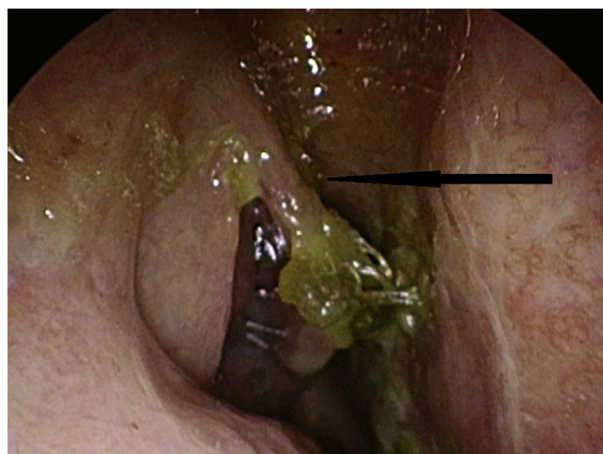


FIGURE 1. Endoscopic view of the nasal cavity with pale mucosa, shrunken turbinate (arrow), dried thick crusts, and viscid purulent discharge.

treatment is nasal irrigation to remove crusts; a short course of antibiotics may be added to reduce the infection. In patients with persistent crusting, modified Young's operation in which the nostrils are partially closed with flaps raised from inside the nasal cavity, leaving a 3-mm hole for breathing, helps in the regeneration of normal nasal mucosa. The disease is persistent and recurrence of crusting is common.

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