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### Atrophic rhinitis – a case study

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#### ABSTRACT:

Atrophic rhinitis is a chronic nasal disease characterized by progressive atrophy of nasal mucosa and underlying bone of turbinates and the presence of a viscid secretion which emits a characteristic foul odour sometimes called ozaena (a stench). There is an abnormal patency of the nasal passages. The incidence varies from 0.3-7.8% of otolaryngology outpatients. A similar nomenclature to ozaena is found in ayurvedic literature as Apeenās, classified under nasarogas. The disease is characterised by nasal obstruction due to crusts, roomy nasal cavity & foul smell emanating from nasal cavity of the patient. Atrophic rhinitis is classified into 2 types viz., primary and secondary. The cause of primary atrophic rhinitis is unknown. Several hypotheses have been proposed, including nutritional deficiencies, heredity, endocrine factors, and bacterial infection with *Klebsiella ozaenae* and *Bacillus foetidus*.

Histopathologically, primary atrophic rhinitis is characterized by squamous metaplasia. This study was carried out in shalakya tantra department, dhanwantri hospital of A.D.A.M. College. patient presented with the complaints of foul smell, difficulty breathing from nose etc. Detailed history and complete ENT examination was done.

**Keywords:** atrophic rhinitis, Apeenās, nasarogas, ozena

#### INTRODUCTION:

Primary atrophic rhinitis or ozaena is a well-known disease for ages and was first described by Fraenkel in the latter part of the nineteenth century. The disease is characterized by a sclerotic change in the mucous membrane and abnormal patency of the nasal passages due to atrophic changes in the mucosa and underlying bones, along with thick viscid secretions which, when dry, emit a characteristic foul smell. Atrophic rhinitis can be classified into two types, that is, a

primary or idiopathic type where the etiology is not known and a secondary type where the disease develops secondary to some other primary disease. The condition is predominantly seen in young and middle aged adults, especially females (F: M = 5.6: 1). It is a common condition in tropical countries such as India. In the countries with higher prevalence, primary atrophic rhinitis can affect 0.3%–1.0% of the population.

The exact etiology of primary atrophic rhinitis is unknown though many theories and hypotheses have been postulated for explanation of atrophic rhinitis. The factors blamed for its genesis are specific infections, autoimmunity, chronic sinus infection, hormonal imbalance, poor nutritional status, heredity, and iron deficiency anemia. Chronic bacterial infection of the nose or sinus may be one of the causes of primary atrophic rhinitis. Classically, *Klebsiella ozaenae* has been implicated most frequently, but other infectious agents associated with atrophic rhinitis include *Coccobacillus foetidus ozaenae*, *Bacillus mucosus*, *Diphtheroids bacillus*, *Bacillus pertussis*, *Haemophilus influenzae*, *Pseudomonas aeruginosa*, and *Proteus* species. Nutritional deficiency, especially of iron, fat soluble vitamins, and proteins, has also been suggested in the etiology of primary atrophic rhinitis. It appears to be more common in lower socioeconomic classes and those living in poor hygienic conditions. A diagnosis of primary atrophic rhinitis is essentially clinical and based on a triad of characteristics: foetor, crusts, roomy nasal cavities.

Among Nasagata Rogas most of the Acharyas described Apinasa including its complication which proves the seriousness of the disease. Acharya

Sushruta clearly mentioned in Utttar tantra that Apinasa is the disease condition in which Vata and Kapha Dushti was observed. Atrophic Rhinitis is a chronic nasal disease characterized by progressive atrophy of the mucosa and underlying bone of the turbinates and the presence of a viscid secretion which rapidly dries and forms crust, which emits a characteristic foul odour sometimes called ozaena castench.

## CASE REPORT

A 48 year old male patient came in OPD of shalakya tantra department of Dhanwantri hospital, in our institute complaining of foul smell, difficulty breathing, frequent cold, anosmia, on taking detailed history, he was suffering from the above mentioned symptoms since 6 months. Patient had taken various treatment but got little relief. In search of a better treatment he opted for taking ayurvedic medicine and visited our hospital at last.

## SYSTEMIC EXAMINATION:

- 1) General condition of patient was moderate.
- 2) Pulse rate 90/min
- 3) B.P. 110/80 MM hg
- 4) No pallor
- 5) Weight: 55 kg ,Height : 5'5
- 6) RS – AE=BE Clear, CVS – S1, S2 normal, no abnormal sound, CNS Conscious.
- 7) No other specific illness
- 8) Ashtavidh Pariksha:
  - Nadi – vatapradhanyakaphaj ,
  - mala – malaavashtmbh (occasional),
  - mutra – samanya,
  - jihva – samnya,
  - shabd - samnya,
  - sparsh – ushna,

- druk – samnya,
- akriti - madhyam

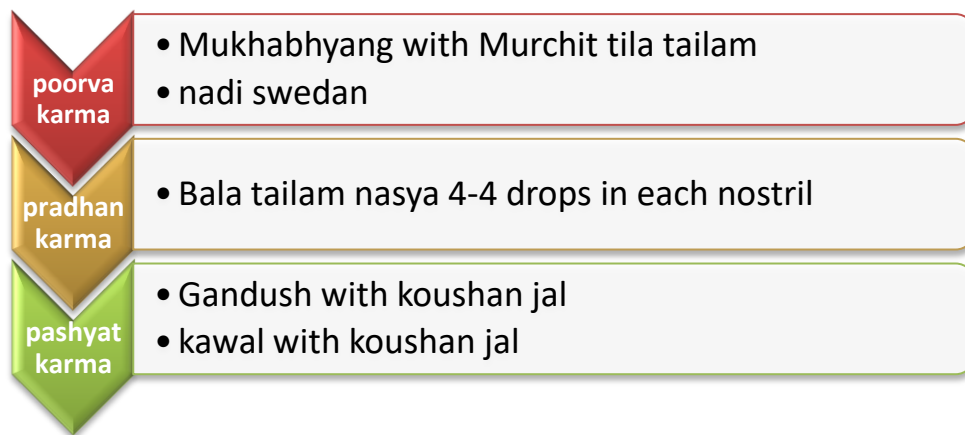
### LOCAL EXAMINATION:

- EAR: no abnormality detected. Tympanic membrane was intact .
- NOSE: detailed examination revealed following signs:
  - foetor present
  - dryness of nose
  - pale nasal mucosa
  - yellow crusts,
  - roomy nasal cavities,

- turbinate hypertrophy
- THROAT: mild congestion

### MANAGEMENT:

1. Nasal irrigation twice a day by mixed solution of following for 10 days:
  - soda bicarbonate,
  - soda biborate,
  - distilled water
2. After 10 day of Nasal irrigation, it was followed by snehaswedapurvak nasya of bala tailam with koshna jal kawal and gandush for 7 days.



- 2 more sittings of weekly nasya were given after taking 3 day break after each week respectively.
  - **Pathya (Do's)** - Advised to take laghu (light), supachya (easy to digest) and ushna (warm) ahaara, ghritapana (intake of ghee), wheat, rice, green gram, brinjal, drum stick, bitter gourd, brahamacharya(maintaining celibacy), alpa bhashana, etc., which pacifies the vatadosha.
  - **Apathya (Dont's)** - Advised to avoid head bath, drink cold water or other drinks, exposure to cold wind, exercise, long talks etc., which leads to aggravation of vata dosha
3. The following medications were prescribed:
    - Sitopladi churan – 1 gm
    - Yastimadhu chran – 1 gm
    - Tankan bhasam – 125 mg

The above mixture to be taken with honey twice a day.

    - Sukshma trifala Vati 1 BD
    - Chesteez cough syrup - 2 tsp BD
    - Saindhav yukt koushan jal gargles twice a day.

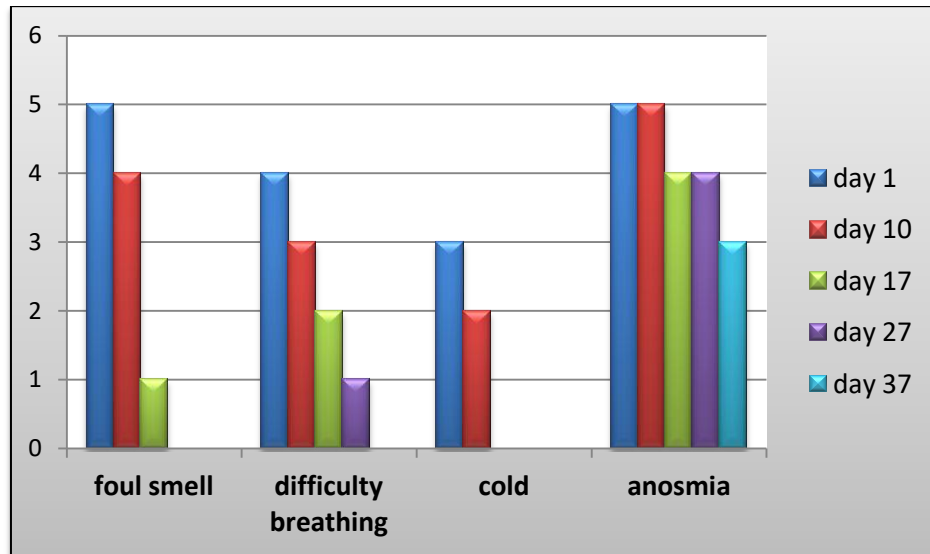
### RESULT:

- A proper clinical examination of sign and symptoms was done and recorded in the patient's case paper. Pt was admitted in shalakya tantra IPD for his treatment, after taking proper

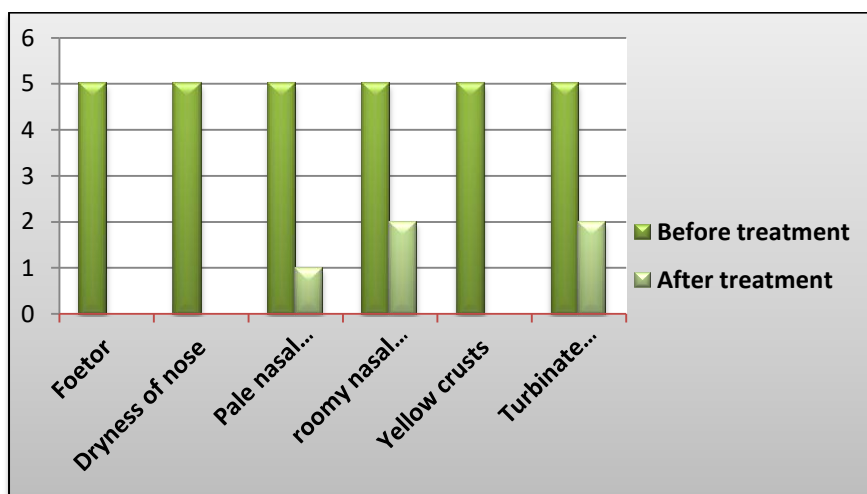
consent. Patient's photographs with atrophic rhinitis were taken for comparison.

- Patient's feedback was recorded after 10 days and on 17<sup>th</sup>, 27<sup>th</sup> and 37<sup>th</sup> day

of treatment. The improvement in the symptoms of patient was measured on a scale of 0 to 5.



- As the patient had become mouth breather, he was advised to practice pranayam to cure difficulty in nasal breathing.
- The clinical signs were also observed in details. The improvement was measured on a scale of 5. It showed the following improvement:



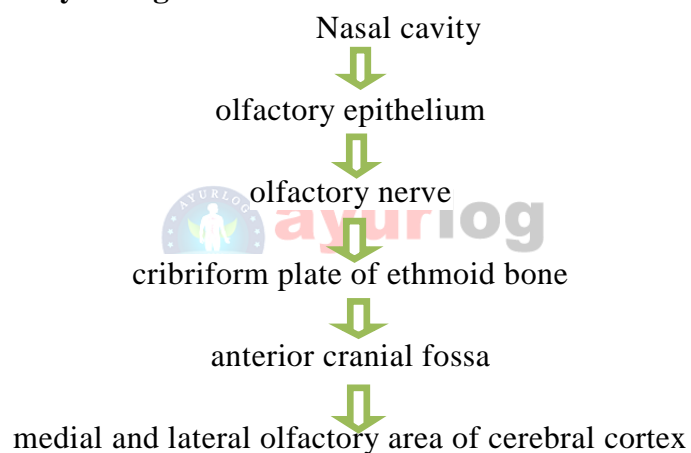
## DISCUSSION:

Foul smell from the nose (ozena) is a characteristic feature of atrophic rhinitis. Normal nasal mucosa is lined with pseudo stratified columnar epithelium and has abundant mucous and serous glands. In atrophic rhinitis, it undergoes squamous

metaplasia and subsequent loss of cilia. Glands and goblet cells become fewer. The endarteritis of blood vessels cause diminished blood supply to the mucosa. As a result of loss of ciliated epithelium, thick viscous secretion of the nose gets stagnated and results in secondary infections and crust formation.

**Mode of action:**

- ❖ *Mukhabhyang*: it increases the blood circulation and helps in mobilization of doshas from site of morbidity to site of elimination.
- ❖ *Nadi swedan*: this procedure of sweating helps in elimination of doshas from affected part in nose from where it is removed by nasya.
- ❖ *Nasya*: in this procedure, the doshas collected in the urdhvang will be expelled out through nose. Here sneha dravayas used for nasya have properties like dravya,
- ❖ **Pathway of nasya drug:**



sukshma, sara, snigdha, and guru because of these properties the drug gets absorbed in nasal mucosa and helps in removal of doshas. It also does the santarpana of tissues, makes the tissues snehakrut, mardavkrut and balakrut.

- ❖ Main contents of bala tailam are:  
Bala root – *Sida cordifolia*  
Tila tailam- sesame oil  
It is anti inflammatory, has wound healing properties and also restores sensory and motor functions and improves blood circulation.

The chemical impulse which is generated by nasya finally converts into neural impulse and influences on cerebral cortex area and thereby producing stimulatory effect resulting in evacuation of doshas.

**Oral medication:**

- ❖ Primary aim of treatment is correcting the agni of the patient and balancing the doshas. The doshas mainly involved in this disease are vata and kapha.
- ❖ patient has been given trifala to balance agni and relieve occasional malavshatmbh. It is

also an immunomodulator. It has katu kshaya rasatmak, rukshgunatmak, kaphaghan, raktshodhan and raktshaman properties.

- ❖ Chesteez cough syrup is an ayurvedic formulation which contains adosa, yastimadhu, pippali, tulsi and draksha. These are kapha shamak dravyas which also acts as immunomodulators and enhance the functioning of immune system.
- ❖ sitopladi churan contains dravyas having kaphashamak properties. It

reduces irritation and soothes the throat.

- ❖ Yastimadhu churan is madhur sheet dravya, acts as swarya, kanthya, kandhugahan, shothghana. It reduces inflammation and irritation. It shows antipyretic and anti-exudative effects.
- ❖ Tankan churan is kapha vata shamak, jantughana, stambhan, ropan , durgandhnashan, deepan and anuloman properties which help to relieve ozeana and helps in repair of nasal mucosa.
- ❖ Madhu is yogvahi, carries all the properties of the drugs mixed with it. It also acts on kapha dosha.

## CONCLUSION:

Atrophic rhinitis is a disease that not only affects the body but it also causes mental depression. There was a classic description of the disease, given by dr. frank Bosworth in 1881, who noted – “the breath is often so penetrating as to render the near presence of the sufferer not an unpleasant but almost unendurable.” So, in such a disease, ayurvedic management shows excellent results .it is worth trying

for longer duration in chronic patients. The overall regimen did not cause any untoward effect.

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