MATERIAL
AND
METHODS
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This study was carried out in the department of Ear, Nose and Throat, M.L.B. Medical College, Hospital Jhansi from Jan., 1998 to Jan., 2000. The cases of atrophic rhinitis including in this study were only those who belonged to Bundelkhand region i.e. Jhansi, Jalaun, Hamirpur, Mahoba, Banda, Lalitpur, Datia, Tikamgarh, Shivpuri, Sagar, Beena, Chattarpur districts etc.

During this period a total number of 25 patients attending ENT department were included in this study. These patients were admitted in ENT wards and subjected to detailed history and examination. The patients belonged to both male and female sexes and were of different age groups.

All the patients were subjected to the clinical work up according to the following protocol.

Clinical Examination

| Name : | Age/Sex |
| Religion | MRD/OPD No. |
| Occupation | Ward/bed |
| Date of Admission | Date of Discharge |
A. **Clinical Data**

a. **History**

1. Complaints with duration
   - Weakness
   - Crusting
   - Ozaena
   - Headache
   - Thirsty feeling

b. **Past History**
   - Trauma
   - Allergy
   - Leprosy

H/o operation
T.B./Syphilis

(c. **Personal History**
   - Use of snuff
   - Socioeconomic status

Smoker
Sinusitis

d. **Family History**

- Drug treatment and operation
- Loss of Sense of smell.
B. Physical Examination

1. General Examination
   General condition
   
   Pulse  Blood Pressure
   Temperature  Paller
   Oedema  Lymphadenopathy

2. Systemic Examination
   ➢ Central Nervous System
   ➢ Cardiovascular System
   ➢ Respiratory System
   ➢ Abdomen
   ➢ Evidence of distant metastases

3. Local Examination
   General
   Face
   Upper 1/3  Middle 1/3  Lower 1/3
   Loss of eyebrow  Nasal bridge deformity

   Ala – Nodular & Rubbery

   Bridge
   Normal
   Swollen
   Sunken
Anterior Rhinoscopy

➢ Vestibule - Loss of vibrissae
➢ Septum Perforation - Collumella
➢ Pyriform aperture - Any obvious abnormality

Lateral wall

(a) Inferior turbinate

(i) Atrophy

(ii) Anterior End

(iii) Mucous Membrane:

Atrophy

Discharge

Colour,

Oedema

Area of bleeding

(b) Middle Meatus

Middle turbinate Type

Site of collection of pus

Mucous membrane:

Atrophy,

Discharge

Amount

Site of origin of pus

Colour

Oedema

Polyposis

Posterior Rhinoscopy

(i) Post end of septum

(ii) Opening of Choana

(iii) Post free end of turbinates

(iv) Discharge
(v) Mass 
(vi) Ethmoid recess 
(vii) Roof of Nasopharynx 
(viii) Adenoids 
(ix) Eustachian tube opening 

Transillumination test: 
Maxillary antrum 
Ethmoidal Sinus 
Frontal Sinus 

Examination of Throat 

Regional lymphadenopathy 

Any other findings 

C. Investigations: 

Blood 

Haemoglobin gm%, TLC Cells/mm 
DLC: P % L % E % B% 
ESR mm in one hour 
Blood urea mg% Blood Sugar mg% 
VDRL Test 

Urine: Alb, Sugar 

Nasal Pus Culture & Sensitivity 

Radiological examination
X-ray PNS – occipitomental view
X-ray skull Lateral view

D. **Histopathological Examination**

The biopsed material was fixed in formline. The processing was done with the help of histokinet.

**Hydration:**

The tissue were dehydrated by passing through different grades of alcohol as summarised below:

- Formal Alcohol (90ml of 70°C ethylalcohol + 10 ml of formaldehyde) - One hour
- 90% ethyl alcohol - One hour
- 95% ethyl alcohol - One hour
- Absolute alcohol (2 changes) - One hour each
- Copper alcohol (2 changes) - One hour each

**Cleaning:**

This was done by summing the tissues through aniline oil – 6 hours and xylene (2 changes) one hour each.

**Impregnation:**
This was achieved by passing the tissues through xylene + Paraffin wax for 1½ hours and paraffin wax for 1½ hours. After preparing the blocks with the help of L shape moulds of brass.

The section were cut at 4-5 mm thickness.

Routine haematoxyline and Eosine staining was done in each case according to technique described by Culling (1963).

The following protocol was followed while carried out the histopathological examination:

Histopathological Examination

Name

Age/Sex

CR No./OPD No.

Histopath Lab No.

Type of Specimen.

Gross appearance

Size

Weight

Consistancy

Solid/Cystic

Colour

Shape

Cut Surface

Any other special feature

Microscopic:

Histopathological findings.
METHOD OF TAKING BIOPSY

INSTRUMENTS USED IN TAKING BIOPSY
BENIBAI - 53 YEARS FEMALE
A CASE OF ATROPHIC RHINITIS

SAME PATIENT SHOWING NOSTRILS