Tumors of the larynx

Benign Neoplasms:-

- Papilloma
- Vascular Neoplasms
- Chondromata
- Myogenic tumours.
- Granular cell tumours
- Fibroma
- Lipoma
- Adenoma
- Neurogenic tumours.
- Para- gangliomata.
- Asymptomatic to start with.
- Give symptoms when sufficient in size due to pressure on nerves ,muscles and other tissues.
- Excision biopsy followed by histopathology is the treatment of choice in most of the cases.

General Features:-

- Early hoarseness later stridor, dyspnoea ,cough, pain.
- Slow to grow.
- Endoscopic removal or laryngofissure followed by histopathology.

Recurrent Respiratory Paplliomatosus:-

- Human papilloma virus- causative agent
- Presents before 4 years of age.
- Hoarseness, abnormal cry, increasing stridor, respiratory distress.

- Disturbance of mucous blanket- causative factor.
- Multiple, recurrent, remission.
- Co2 laser, tracheostomy, Interferon, methotrexate.

Malignant Neoplasms:-

Etiology:-

- Genetic predisposition.
- Environmental pollution.
- Cigarette smoking.
- Alcohol intake.
- Chronic irritation.

Pre-malignant conditions e.g. Leukoplakia, Keratosis.

Pathology:-

Macroscopy:-

- Cauliflower like
- Infiltrative
- Ulcerative
- Sheets of keratotic epithelium

Microscopy:-

- A- Epithelial tumours (Squamous cell carcinoma, Adenocarcinoma, Adenoid cystic carcinoma)
- B- Connective tissue tumours (Fibrosarcoma, Liposarcoma, Osteogenic

sarcoma, Chondrosarcoma, Lieomysarcoma).

Site of Origin:-

- Supraglottis - 19%
- Glottis - 76%
- Subglottis - 05%

Spread:-

- Local
- Regional: To the cervical lymph nodes18%
- Distant (Lung, Liver, Brain, Bone)

Clinical features- Symptoms:-

- Progressive and unremitting dysphonia.
- Dyspnoea.
- Stridor.
- Pain / Referred pain.
- Dysphagia.
- Cough and irritation.
- Neck swelling.
- Hemoptysis, Anorexia, Cachexia.

Clinical Features- Signs:-

- EXAMINATION OF LAYNX

1-External examination + Mobility.

2- I.D.L.

3- Examination of the neck.

- Examination of ear, nose and throat.
- Systemic examination.

Investigations:-

Routine investigations:-

- Blood .
- Urine .
- Blood sugar.
- Blood urea.
- X-ray chest PA view.
- E.C.G.

Specific investigations:-

- X-ray neck A.P and lateral views.
- CT Scan .
- MRI.
- Laryngography.
- Direct Laryngoscopy.
- Histopathology.

Staging:-

- TNM classification:-
- T- Tumour.
- N- Lymph node.
- M- Metastasis.

T-Primary Tumour:-

- Tis - Preinvasive carcinoma
- To- No evidence of primary tumour.
- T1- Tumour confined to the region with normal mobility.

T1a - unilateral.

T1b- bilateral.

- T2- Tumour confined to the larynx with

extension to adjacent sites without vocal cord fixation / superficial involvement of adjacent

oro/hypopharynx.

- T3- Tumour confined to the larynx with vocal cord fixation or deep spaces involvement.
- T4- Direct extralaryngeal spread.

4a and 4b (prevertebral space, mediastinal structures or encases carotid artery)

N- Lymph Nodes:-

- No- No evidence of lymph node metastasis.
- NX- Regional lymph nodes cannot be assessed
- N1- Metastatic ipsilateral lymph nodes 3cm or less than 3cm in greatest dimension.
- N2a- Metastasis in Single ipsilateral lymph nodes between 3cm-6cm in greatest dimensions.
- N2b- Metastasis in Multiple ipsilateral L-nodes, none more than 6cm in greatest dimensions.
- N2C-Metastasis in Bilateral or contralateral L.N. none more than 6 cm in greatest dimension
- N3- Metastasis in a lymph node more than 6 cm in greatest dimensions

M-Metastasis:-

- Mo - No evidence of metastasis
- M1- Evidence of distant metastasis present.

Treatment:-

- Palliative

Attempts to suppress the size and symptoms of the tumour without the intent to cure.

- Curative

Treatment of the tumour with the intent to cure.

MAJOR MODALITIES

- Radiations
- Surgery
- Chemotherapy

MINOR MODALITIES

- Laser
- Cryosurgery

Radiations:-

Advantages:-

- Functional preservation.
- Patient's preference
- No post. Operative complication.
- Deals effectively with the microscopic invasion into the adjacent lymphatic and venous channels.
- Can be employed for all sorts of curative and palliative purposes.

Disadvantages:-

- Ineffective at the necrotic centre of tumour so ineffective against large bulky tumours.
- Relatively ineffective against Radio resistant tumours.
- Post radiation reactions.
- Morbidity.

Radiations:-

- Curative small superficial lesions and highly radiosensitive tumours.
- Palliative.

- Adjunctive:- for Massive tumours

Surgery:-

Advantages:-

- Can be employed for all tumour sizes for palliative and curative purposes.
- Can be used for nodal disease.
- Tumour can be assessed per-operatively.

Disadvantages:-

- Functional loss.
- Complications of anaesthesia and surgery.
- Patient's reluctance.
- Problems of reconstruction.

Surgery of the larynx:-

- Supraglottic partial laryngectomy.
- Vertical partial laryngectomy.
- Total laryngectomy.
- Extended total laryngectomy.
- E. Total laryngectomy with radical neck dissection.

Chemotherapy:-

- Palliative.
- Adjunctive:-

1- Chemoradiation.

2- Surgery followed or preceded by chemoradiation.

Laser & Cryosurgery:-

- Palliative role .

- CO_2 Laser may be employed for very small lesions as curative e.g. T1a lesions.

SPEECH REHABILATATION

- Esophageal speech
- Artifical prosthesis
- Electrolaynx