Bronchogenic carcinoma
Bronchogenic carcinoma is also called Lung cancer. It is a frequent and important neoplasm in both developed country and developing country. In recent years, it is reported that lung cancer is the leading fatal neoplasm of men and women. It is strongly associated with the use of tobacco products, particularly with cigarettes.
Etiology of bronchogenic carcinoma

- **Risk factors:**
  1. Smoking: Smoker have 10 time greater risk than nonsmoker. Benzpyrene is the carcinogenic substance
  2. Radioactive substances e.g. Radium
  3. Atmospheric pollution e.g. industrial fumes
  4. Occupational hazards e.g. asbestose
Etiology of bronchogenic carcinoma

Most lung cancer arises by stepwise accumulation of genetic abnormalities that transform benign bronchial epith to neoplastic one
Pathology of bronchogenic carcinoma

- **Site:**
  1. Central 55% arises from main bronchus
  2. Peripheral 40% arises from small bronchi and bronchiole
  Diffuse 5%
Bronchogenic carcinoma
Histopathological classification:

1. Squamous cell carcinoma; arises from squamous metaplastic epithelium---dysplasia---carcinoma in situ---invasive carcinoma.

It is usually poorly differentiated
Squamous cell carcinoma of bronchus
2. Oat cell carcinoma: Arises from neuroendocrine cells in the bronchial mucosa. Consist of small hyperchromatic cells similar to aot seeds. Arranges in sheets.
Oat cell carcinoma – Bronchus
3. Adenocarcinoma: Arises from mucus gland in the bronchial mucosa, consist of malignant glands with mucus secretion.

4. Broncho alveolar carcinoma: A form of adenocarcinoma arises from terminal bronchoalveolar region. It grows on preexisting structure (alveolar wall) without its destruction.
5. Large cell carcinoma: • Undifferentiated carcinoma consist of large hyperchromatic cells with some giant malignant cells. It is probably of squamous or adeno carcinoma.
1. **Direct spread**: to pleura, pericardium, Esophagus, left recurrent laryngeal nerve. Tumor at the apex may involve brachial plexus causing pain and muscle atrophy.

- Involving the cervical sympathetic chain leading to Horner syndrome (contracted pupil, ptosis & ipsilateral facial anhydrosis)
2. Lymphatic spread: To the hilar, trachiobronchial, mediastinal, supraclavicular lymph node leading to enlargement of the lymph node (lymphadenopathy)
Spread of bronchogenic carcinoma

3. Blood spread: to the liver, bone, adrenal, brain, etc.
Effects occur in patients with bronchogenic carcinoma which is neither due to the primary tumour nor to the secondary. But probably due to substances secreted by the tumor.

It may be:
1. Endocrine syndrome
2. Neurological syndrome
1. Endocrine syndrome:

a. Cushing syndrome: oat cell carcinoma secrete ACTH

b. Secretion of ADH by oat cell lead to water retention and brain edema

c. Hypercalcaemia due to secretion of parathyroid like hormone by squamous cell carcinoma
2. Neurological syndrome:
   a. peripheral neuropathy,
   b. encephalopathy
   c. myopathy

3. Dermatomyocytis

4. Pulmonary osteoarthropathy with clubbing of fingers
It is poor. The overall 5 year survival rate is 16%.
THANKS FOR LISTENING