LUNG CANCER

AN OVERVIEW

Compiled by

Campbell M Gold

(2004)

CMG Archives
http://campbellmgold.com

--()--

IMPORTANT

The health information contained herein is not meant as a substitute for advice from your physician, or other health professional. The following material is intended for general interest only; and it should not be used to diagnose, treat, or cure any condition whatever. If you are concerned about any health issue, symptom, or other indication, you should consult your regular physician, or other health professional. Consequently, the Author cannot accept responsibility for any individual who misuses the information contained in this material. Thus, the reader is solely responsible for all of the health information contained herein. However, every effort is made to ensure that the information in this material is accurate; but, the Author is not liable for any errors in content or presentation which may appear herein.

--()--

Introduction

Lung cancer is a respiratory disorder attributable to cigarette smoking in 75% of cases. Other causes are exposure to asbestos, arsenic, beryllium, chromium, coal products, ionising radiation, iron oxide, nickel, petroleum, uranium, and various other chemicals.

(Picture right – Lung Cancer in the Top Half of the Lung)

Lung cancer develops most often in scarred or chronically diseased lungs, and is usually far advanced when detected. Symptoms of lung cancer include persistent cough, breathing difficulty, pus or blood-streaked sputum, chest pain, and repeated attacks of bronchitis or pneumonia. Lung cancers spread widely to other organs. Oat-cell carcinomas, which resemble tiny oat seeds, usually invade bone marrow, whereas large-cell lung cancers spread to lymph nodes in the chest and the gastrointestinal system.

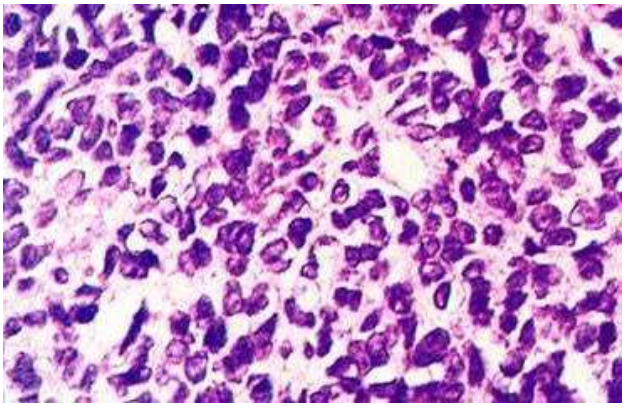
Surgery is the most effective treatment, but only one-half of the cases can be treated by surgery by the time the disease is detected. Surgery is not

performed if cancer cells are found in nearby lymph nodes. Radiation is used to treat localized lesions and cancers untreatable by surgery. Chemotherapy is especially prescribed for oat-cell carcinoma. Bacillus Calmette-Guerin vaccine, an antituberculosis drug that stimulates the natural resistance to disease (immune system), is administered to some patients with early stage lung cancer.

Lung Cancer - Detailed

The major histologic types of lung cancer are non--small cell cancers (squamous cell cancer, adenocarcinoma, and large cell undifferentiated cancer), which account for 90% of lung cancers, and small cell lung cancers, which make up the remaining 10%.

Oat Cell Carcinoma

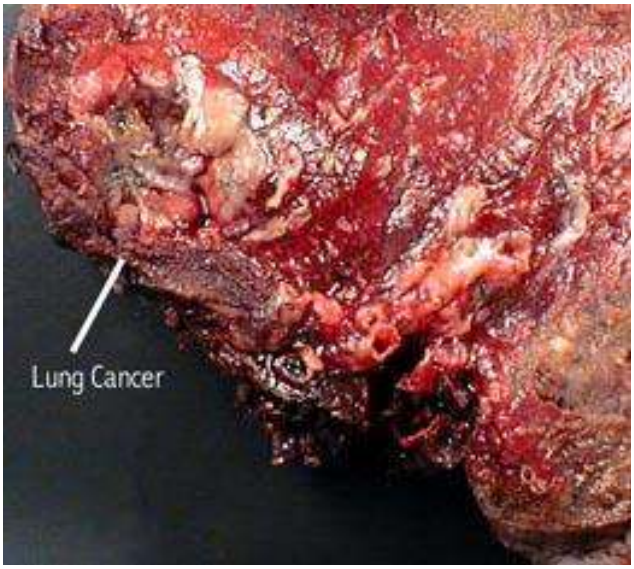


Oat cell carcinoma, small cell carcinoma, also called small cell carcinoma.

(Picture right - Oat Cell Carcinoma)

A cancer that usually begins in the surface layer cells of one of the breathing tubes leading to the lungs. Tumours caused by these cells do not form areas of tissue but usually spread along the lymph system. One third of all cancerous tumours of the lung are of this type. Usually surgery cannot be done, and chemotherapy and radiation do not work. Thus, the outlook is poor.

Causes and Incidence Cigarette smoking is implicated in approximately 80% to 90% of all cases of lung cancer. Occupational exposure to asbestos, radon, nickel, chromium, hydrocarbons, and arsenic is linked to 10% to 15% of lung cancers. The role of air pollution and home exposure to radon gas is unclear. Lung cancer is the leading cause of cancer death for both men and women in the United Kingdom.



(Picture right – Lung Cancer)

Disease Process Squamous cell carcinomas usually begin in the larger bronchi, often causing bronchial obstruction and spreading by direct extension and lymph node metastasis.

Adenocarcinomas are peripheral tumours that begin in fibrotic lung tissue and spread through the bloodstream, commonly metastasising to the brain, liver, and bone. Large cell undifferentiated carcinoma, which may arise in any area of the lung, disseminates early, spreading through the bloodstream. Small cell carcinoma is centrally located and is the fastest growing type of lung cancer, with rapid metastasis to the brain, liver, and bone.

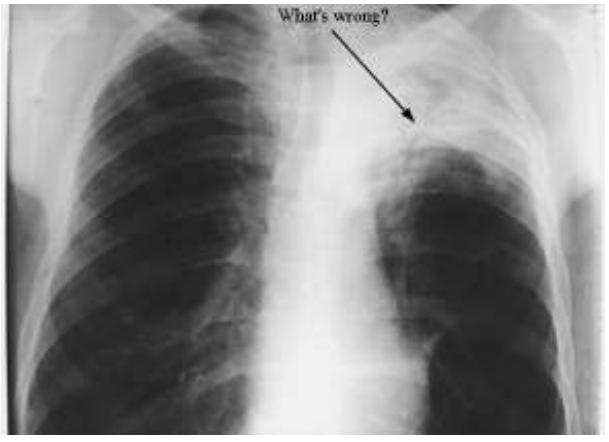
(Picture below – Lung Cancer and Emphysema)

Symptoms A chronic cough, a change in the volume and colour of sputum, chronic upper respiratory tract infections, and aching in the chest are common presenting symptoms. Wheezing, fatigue, and chest tightness may also be present.

Potential Complications The prognosis is poor. The long-term survival rate in individuals with localized disease is only 35%, and most people have extension and metastasis upon diagnosis. Overall the survival rate for all individuals regardless of stage is 13%. Complications include superior vena cava syndrome, paraneoplastic syndromes, and cor pulmonale.

Diagnostic Tests A history of smoking and a chest x-ray are the principal sources of diagnostic suspicion.

(Picture right – X-Ray indicating Lung Cancer)



A sputum cytology test is positive in about 75% of cases. Retrieval of cells through bronchoscopy or needle or tissue biopsy provides the definitive diagnosis.

Treatments

Surgery - Resection of tumour and surrounding tissue; lobectomy or pneumonectomy

Drugs - Systemic multi-drug combination chemotherapy; biologic response modifiers

General - Radiotherapy before and after surgery and for palliation; smoking cessation; prevention through education about dangers of tobacco and environmental irritants.

End

--()--

http://campbellmgold.com

27082010