Lung cancer: risk factors, management, and prognosis

Abstract

Lung cancer or lung tumor the most common cause of cancer death in men and second most common in women after breast cancer. Highest rates in North America, Europe, and East Asia, with one third of new cases in China, lower rates in Africa and South Asia. Worldwide in 2012 lung cancer resulted in 1.6 million deaths. Risk factors include smoking, exposure to radon gas, asbestos, second-hand smoke, air pollution, and geneticfactors. Pathogenesis is similar to other cancers, by activation of oncogenes or inactivation of tumor suppressor genes. Two main types of lung cancer are small-cell lung carcinoma(SCLC),and non-small-cell lung carcinoma(NSCLC) Clinical manifestation include coughing, coughing blood, weight loss, weakness, fever or clubbing of the fingernails, hypercalcemia, myasthenia syndrome (muscle weakness), and metastases. Metastatic disease includes weight loss, bone pain and neurological symptoms. Diagnosis mainly by chest radiographs and computed tomography (CT) scans. Lung cancers are classified according to histological type, staging uses TNM (tumor, lymph node and metastases) system. Management depends on cancer specific type, by surgery, radiotherapy and chemotherapy. In the U.S 16.8% survive for at least five years, in England overall five year survival less than 10%.Prevention, cessation of smoking, screening for lung cancer for those long smoking history and between 55 and 80 years. Long term intake of vitamin A,vitamin vitamin D, or vitamin E does not reduce risk of lung cancer. Higher intake of vegetables and fruit tend to lower risk. There is no clear association between diet and lung cancer.