

Elaboration of bronchial tumors and development.

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Abstract

Lung cancer or bronchogenic carcinoma refers to tumors originating in the lung parenchyma or within the bronchi. It is one of the leading causes of cancer-related deaths in the United States. Since 1987, lung cancer has been responsible for more deaths in women than breast cancer. It is estimated that there are 225,000 new cases of lung cancer in the United States annually, and approximately 160,000 die because of lung cancer. It is interesting to note that lung cancer was a relatively rare disease at the beginning of the 20th century. Its dramatic rise in later decades is attributable primarily to the increase in smoking among both males and females. This activity reviews the causes, pathophysiology, and presentation of lung cancer and highlights the role of the interprofessional team in its management.

Keywords: Bronchial tumors, Lung cancer, Bronchogenic carcinoma.

Introduction

Lung cancer or bronchogenic carcinoma refers to tumors originating in the lung parenchyma or within the bronchi. It is one of the leading causes of cancer-related deaths in the United States. Since 1987, lung cancer has been responsible for more deaths in women than breast cancer. It is estimated that there are 225,000 new cases of lung cancer in the United States annually, and approximately 160,000 people die because of lung cancer. It is interesting to note that lung cancer was a relatively rare disease at the beginning of the 20th century. Its dramatic rise in later decades is mostly attributable to the increase in smoking among both males and females [1].

Smoking is the most common cause of lung cancer. It is estimated that 90% of lung cancer cases are attributable to smoking. The risk is highest in males who smoke. The risk is further compounded with exposure to other carcinogens, such as asbestos. There is no correlation between lung cancer and the number of packs smoked per year due to the complex interplay between smoking and environmental and genetic factors. The risk of lung cancer secondary to passive smoking increases by 20 to 30%. Other factors include radiation for non-lung cancer treatment, especially non-Hodgkins lymphoma and breast cancer. Exposure to metals such as chromium, nickel, arsenic, and polycyclic aromatic hydrocarbons is also associated with lung cancer. Lung diseases like idiopathic pulmonary fibrosis increase the risk of lung cancer independent of smoking [2].

Asbestos and radon are established risk factors for lung cancer as well. Asbestos exposure, particularly occupational exposure, increases the risk for lung cancer in a dose-dependent manner but varies according to the type of asbestos fiber. Nonoccupational asbestos exposure risk is less defined.

However, the United States Environmental Protection Agency (EPA) has set standards for low-level acceptable nonoccupational asbestos exposure, stating that the health risk to occupants of a building in which asbestos is undisturbed without respirable particles is not significant [3].

Radon exposure in uranium miners was associated with a small but significant risk of lung cancer. Radon has also been shown to accumulate in homes as a decay product of uranium and radium. A meta-analysis of European studies reported appreciable hazards from residential radon, particularly for smokers, and was responsible for approximately 2% of all deaths from lung cancer in Europe [4].

Historically, the lung cancer epidemic seems to involve the developed world only. Recent data suggest that the incidence of lung cancer is dramatically rising, with nearly half of new cases, 49.9%, diagnosed in the underdeveloped world. In the United States, mortality is high in men compared to women. Overall, there is no racial difference in the incidence of lung cancer, but the age-adjusted mortality rate is higher in African American males than their Caucasian counterparts. No such distinction exists between women [5].

Conclusion

Lung cancer screening uses a low-dose helical CT scan of the chest which takes less than 25 seconds. A significant drawback of screening is the detection of benign lesions, resulting in a relatively high number of unnecessary biopsies, surgeries, or continued radiological follow-ups. The key is for the interprofessional team to communicate and determine the best course of action. A collaborative interprofessional team can greatly improve clinical outcomes for this disease.

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