



A Study Of Clinical,Radiological , Bronchoscoptic,Cytological And Histopathological Correlation In Lung Neoplasm.

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Abstract

Introduction:-Lung cancer is one of the most prevalent and lethal cancers, accounting for 17.8% of all cancer deaths. ^[1] In India initially thought to be infrequent, lung cancer is the fifth common cancer^[1] Squamous cell type is the most common cell type in smokers and adenocarcinoma in nonsmokers^[2] Small cell carcinoma has a weaker association with smoking.^[3]

Method:- A clinical, radiological, bronchoscopic, cytological and histopathological evaluation of 50 cases of lung neoplasm was done in pulmonary medicine department of CU Shah medical college.

Result:-In the present study most common cause of lung cancer is squamous cell carcinoma in smokers and adenocarcinoma in non smokers. Small cell carcinoma has a weaker association with smoking.

Conclusion:- .Male preponderance seen. Peak incidence in age of 50-69years age group .Smoking is major risk factor. Clubbing commonly seen in squamous cell carcinoma. Most common bronchoscoptic finding is mucosal abnormality .Finding of luminal narrowing is seen in adenocarcinoma. Overall most common is squamous cell carcinoma.²nd most common is adenocarcinoma. Bronchial biopsy is superior than bronchoalveolar cytology.

Keywords:

Introduction

Lung cancer is one of the most prevalent and lethal cancers, accounting for 17.8% of all cancer deaths. ^[1] Since 1970s, the 5 year survival rate of lung cancer has remained unchanged at <15%. ^[1] It has been recognized that the prognosis of lung cancer is strongly related with the stage of cancer at the time of diagnosis, and 5 year survival rates range from 5% for stage IV cancers to 80% for stage I cancers^[1] Therefore, improving the detection rate of early stage lung cancer is essential for improving the prognosis of lung cancer. In India initially thought to be infrequent, lung cancer is the fifth common cancer^[1] Squamous cell type is the most common cell type in smokers and adenocarcinoma in nonsmokers^[2] Small

cell carcinoma has a weaker association with smoking.^[3] Symptoms such as fever, cough, expectoration, hemoptysis, weight loss, and anorexia are common to both tuberculosis (TB) and lung cancer. A significant number of lung cancer cases are initially misdiagnosed and treated as TB. ^[4] More so in our country where TB is still the most common disease and is the main culprit for delay in diagnosis and treatment of lung cancer. The only hope of combating the disease successfully remains in diagnosing the disease at the earliest possible stage, preferably before the lesion has reached the stage of a visible and palpable tumor. A long standing goal of cancer researchers has been to develop techniques that would facilitate earlier diagnosis and treatment of lung cancer and thereby decrease its mortality.

Although histopathology remains the gold standard, but it is not possible to perform bronchial biopsies in all patients with suspicion of cancer. In cases where lesions are peripheral, and there is risk of hemorrhage taking bronchial biopsy becomes more difficult and requires expertise. Biopsies are time consuming and there is increased pressure on pathologist to report cases as early as possible. Cytological techniques are

Methodology:-

Clinical evaluation of Lung Neoplasm.

Radiological Evaluation of clinical diagnosis of Lung Neoplasm.

Bronchoscopic Evaluation of Clinical diagnosis of Lung Neoplasm.

Result:-

safer, economical, and provide quick results. Bronchoscopic washing, brushing, and fine needle aspirations not only complement tissue biopsies in the diagnosis of lung cancer but are also comparable. The availability of good reliable investigation will enable us to diagnose lung cancer at an early stage, making it amenable to current treatment regimes.^[5] This will ultimately affect patient’s survival.

Cytological Evaluation of Clinical diagnosis of Lung Neoplasm.

Histopathological Evaluation of Clinical diagnosis of Lung Neoplasm. Find out if any correlation of clinical, radiological, bronchoscopic, cytological and histopathology findings of lung neoplasm.

Table 1: Incidence Of Various Symptoms

Symptoms	Percentage
Cough	90%
Fever	22%
Dyspnea	78%
Weight loss	86%
Hemoptysis	32%
Change in voice	10%
Chest pain	72%

Table 2: Incidence Of Smoking

	Male %	Female%	Total%
Smoker	78	0	78
zNonsmoker	8	14	22
Total	86	14	100

Table 3: Type Of Malignancy In Smokers

Type of malignancy	Percentage
Squamous cell carcinoma	64.1%
Small cell carcinoma	15.4%
Non small cell carcinoma	7.7%

Adeno carcinoma	12.8%
Total	100%

Table No 4 : Side Of Involment

Side of involvement	Percentage
Right	50%
Left	36%
Bilateral	14%
Total	100%

Table No 5 :Other Features Association

Feature	Percentage
Clubbing	70%
Lower lung field involvement	44%
Cavitory lesion	42%

Discussion:

50 cases of lung neoplasm were studied by clinical, radiological, bronchoscopic, cytological and histopathological methods. In the study group, 86% were males and 14% were females and the male to female ratio was 6.1:1.74% of patients in age group between 50-69 years and 92% of the patients were above the age of 49 years. The predominant presenting symptoms noted were cough (90%), weight loss (86%), dyspnea (78%), chest pain (72%) and hemoptysis (32%) in most of patients. 90.6% of male patients in our study were smokers and there was no smoking case in female group. Among smokers, most frequent histopathological type of malignancy was squamous cell carcinoma (64.1%) followed by small cell carcinoma (15.4%) and adenocarcinoma (12.8%). Among non-smokers, most frequent histopathological type of malignancy was squamous cell carcinoma (36.3%) followed by non-small cell carcinoma (27.3%) and adenocarcinoma (27.3%). In present study 50% of patients had right lung involvement on chest radiology, 36% had left lung involvement. In 14% of patients both lung were involved. In the study group 70% of patients had clubbing present which was most commonly associated with squamous cell carcinoma (60%) followed by adenocarcinoma (14.3%) and small cell carcinoma (14.3%). 42% of the patients showed radiological features suggestive of upper lobe involvement and 44% had lower lung field tuberculosis and 14% had multiple zone involvement. Right sided lesions were noted in 52% of cases, left sided in 22% and 26% had bilateral tuberculosis. Cavitory lesions (42%) were the most common radiographic lesion noted in both age group patients followed by fibrosis (30%) and infiltration (16%).

Conclusion

50 cases of lung neoplasm were studied by clinical, radiological, bronchoscopic, cytological and histopathological methods. Male preponderance seen. Peak incidence in age of 50-69 years age group. Smoking is major risk factor. Clubbing commonly seen in squamous cell carcinoma. Most common bronchoscopic finding is mucosal abnormality. Finding of luminal narrowing is seen in adenocarcinoma. Overall most common is

squamous cell carcinoma. 2nd most common is adenocarcinoma. Bronchial biopsy is superior than bronchoalveolar cytology. Early interventions like CT Chest and bronchoscopy may increase early detection of lung cancer.

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