

Epidemiology of Lung Cancer in Pakistani Patients – Our Experience at Shaukat Khanum Memorial Cancer Hospital and Research Centre (SKMCH & RC)

FAUZIA RANA, HAMMAD RANA, JAWAD GILL, KHAWAR SAEED

Medical Oncology, Shaukat Khanum Memorial Hospital, Lahore

Correspondence to: Dr. Fauzia Rana

Lung cancer is one of the most commonly occurring malignancies in the world. In most developed countries, death rate due to all malignancies except lung cancer, have shown a decline in the last 20 years. During this period, death rate due to lung cancer showed an increase. Recently there is a declining trend. In the developing countries like Pakistan, However, death rate due to lung cancer continue to accelerate. The true incidence of lung cancer is not known in Pakistan due to lack of available data. Recently collected data from SKMCH & RC tumor registry shows that it accounts for <10% of the cancers diagnosed at our institution. A retrospective analysis of 182 diagnosed patients with lung cancer at SKMCH was conducted. The data were analysed with respect to age, history, clinical symptoms, stage at presentation and history of smoking. The most common occurrence of lung cancer was in patients above the age of 50 years and non small cell lung cancer was the most common histology. Majority were found to have cough, chest pain and haemoptysis. Approximately 75% had positive history of smoking.

Keywords: Lung Cancer, Epidemiology, Cross Sectional Data, Shaukat Khanum Memorial Cancer Hospital and Research Centre

Lung cancer is the leading cause of cancer death world wide. The incidence of lung cancer is declining parallel to decrease in cigarette smoking in Western World. In contrast incidence of lung cancer in women is increasing at the same rate as was seen approximately 20 years ago in men.

Although there is decline in incidence of lung cancer in developed countries, there is a rise in incidence of lung cancer in developing countries like Pakistan. Rise in lung cancer incidence in Africa is 42% and in Asia it is 22%. Since there is an increasing rise of tobacco use in Pakistan especially in younger age group, we suspect, during the next decade, death from lung cancer will rise.

Epidemiology of lung cancer in Pakistan is difficult to describe. This is mainly due to the lack of a population based Tumor Registry. At best, single institutional analysis can be evaluated. This cross sectional data is obviously limited in information with geographic and time constraints.

We are presenting our data about lung cancer patients collected at Shaukat Khanum Memorial Cancer Hospital and Research Center (SKMCH & RC) between December 1994 and January 1997. SKMCH & RC is a tertiary care cancer hospital located in Lahore. The hospital is fully equipped for comprehensive cancer care. We have our own Hospital Tumor Registry. SKMCH & RC has evaluated so far 18,000 plus patients in the last three years, with wide range of malignancies.

Patients and Method:

This is a retrospective analysis of patients who were diagnosed with lung cancer. Information were collected

on special epidemiological and risk profile forms. Data were collected with respect to clinical symptoms at the time of presentation, mode of diagnosis, stage at presentation, type of lung cancer, history of smoking and the type of treatment.

Results

Total of 162 profiles were reviewed and analyzed. Most of the patients had some symptoms at the time of diagnosis. Including cough, chest pain, SOB. Non small cell lung cancer (NSCLC) accounted for 80% of lung cancer, while small cell presented only 20%. Median age was 58 years. Majority of patients were male. Seventy percent of our patients had history of smoking, right sided lesions were more common. Fifty nine percent of our patients were diagnosed on bronchoscopic examination. ECOG (Eastern Cooperative Oncology Group) Performance Status of our patients was 2 or more. Majority of our patients presented with stage III or IV diagnosed as non small cell lung cancer and in small cell lung cancer 70% had extensive stage disease. Among non small cell lung cancer squamous cell carcinoma was the most common histology followed by Adenocarcinoma.

Since majority of patients present at their last stage of illness, were offered palliative treatment with pain control and radiotherapy. Their ECOG performance status was G-III and IV.

Discussion:

Although data we have collected does not truly reflect incidence of lung cancer, it certainly serves to illustrate an example in cross sectional view of lung cancer patients.

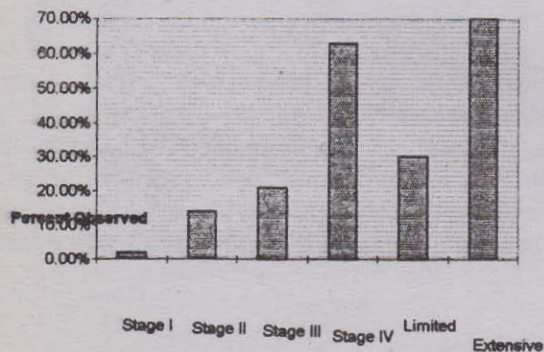
Epidemiology of Lung Cancer in Pakistan

Several interesting aspects emerged from our data, that correlates with the literature. We are limited from a geographical point of view as the hospital is located in Lahore. But since this is a charity hospital and the only cancer center in the country, we see patients from all over the country. We believe that lung cancer is under reported due to symptoms resemblance with TB and majority of patients received treatment for TB prior to diagnosis of lung cancer and they do not get to us for evaluation. Since lung cancer being a symptomatic disease at the time of presentation patients receive other therapies prior to diagnosis, and most of them die even before diagnosis is established.

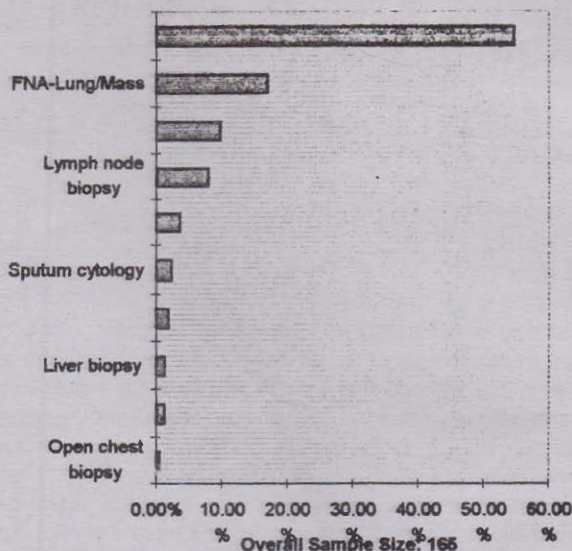
The risk factor associated with lung cancer is tobacco use. We observed strong association between tobacco use and lung cancer and since there is an increased use of tobacco in developing countries, we are going to see epidemic of lung cancer if we do not take appropriate measure to stop tobacco smoking.

It is well known that survival is affected by early diagnosis. Majority of our patients are presenting at a late stage and ultimately are not candidate for curative therapy like surgery. About 70% of our patients received radiotherapy after diagnosis for palliation and only 2% of our patients had surgery. International data suggests that lung cancer death rate parallel cigarette smoking and it has surpassed breast cancer as the leading cause of cancer death in women. Our data suggest 75% association of cigarette smoking with lung cancer. Patients in Pakistan with lung cancer and smoking habit, smoked approximately for 30 years before diagnosis was established. People in Pakistan have very little education about cancer in general and especially lung cancer association with cigarette use. We believe this is our duty as physician, surgeon, oncologist to direct our efforts to encourage legislative activity (for example smoke free areas, banning tobacco ads), educational activities through mass media and schools.

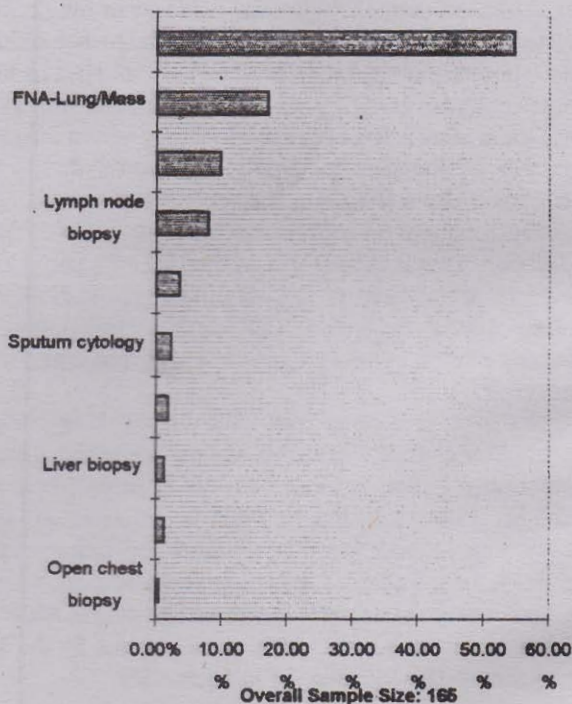
Lung Cancer: Stage at Presentation



Lung Cancer: Tissue Diagnosis



Lung Cancer: Tissue Diagnosis



Conclusion:

Lung cancer is the most common malignant disorder in the world. The incidence of lung cancer in Pakistan is not known. But it is believed that there is rise in incidence of lung cancer in developing countries. There is solid scientific information linking smoking with lung cancer. We should make especial efforts to educate our young generation against tobacco use. There is great need for Population Tumor Registry to find out the true incidence of lung cancer. We should also make special efforts to diagnose and treat lung cancer at early stage.

References:

1. Declining lung cancer rates among young men and women in United States; A Cohort Analysis J Natl Cancer Inst: 81;1598, 1989
2. Ethnic differences in the lung cancer risk associated with smoking, Cancer Epidemiol Biomarker Prev 1:103, 1992
3. Lung cancer among women in NE China Br Jr Cancer 62; 982, 1990
4. The World Health Organization Histologic Typing of Lung Tumors Amr J Clin Path 77:123 1982
5. Clinical Oncology by Martin D. Abeloff, James O Armitage, Allen S Lichter, John E Niegerhuber, Churchill Livingstone New York, ISBN 0-443-08941-8
6. Cancer Principles and Practice of Oncology by Vincent T Devita, Hellman Samuel, Rosenberg A Steven, 5th Edition, Lippincott Raven Publishers, Philadelphia ISBN 0397-51573-1