THE SOCIODEMOGRAPHIC PROFILE OF LUNG CANCER

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Abstract
Background: At our tertiary care hospital we receive a large number of lung cancer patients, mostly in poor general conditions; hence we decided to conduct this study to perform a comprehensive evaluation of the demographic profile of lung cancer at our institute, Institute of respiratory disease (IRD), Swai Man Singh Medical (SMS) College and Hospital

Methods: This study was conducted at Institute of Respiratory Disease (IRD), Swai Mansingh (SMS) Medical Collage, Jaipur after taking necessary permission from Ethical Committee and Research Review Board of SMS Medical College, Jaipur.

Results: Mean age of the patients was 61.4±6.8; it was higher in male 61.60±6.7. Out of 105 patients majority of patients were (85.7 %) male. Most of the patients (72.4%) were belonged to rural area .In context of education it is indicated that about 36 % of the patients were primary school educated while 25.7 to 26.7 constituted high & middle school respectively followed by graduate & illiterates (5.7 %) respectively

Conclusion: We concluded that lung cancer was commonly found in elderly male belong to low socio-economic status

Keywords: Lung cancer, Male, SES

Introduction
Cancer one of the most important causes of death worldwide and is the reason for death in economically developing and developed countries and the second most regular illness after cardiovascular disease

Lung cancer considered as the most common and fatal forms of cancer because lack of proper diagnosis and lack of effective treatments and it accounts for more deaths than any other cancer types. In 2012, nearly 1.8 million new lung cancer cases were reported, and it represented about 12.9% of the total cancer occurrence globally

The GLOBOCAN 2018 estimated that in both genders combined, lung malignancy is the most identified (11.6% of the aggregate cases) and the prominent reason for cancer deaths (18.4% of the total mortality due to cancer).

At our tertiary care hospital we receive a large number of lung cancer patients, mostly in poor general conditions; hence we decided to conduct this study to perform a comprehensive evaluation of the demographic profile of lung cancer at our institute, Institute of respiratory disease (IRD), Swai Man Singh Medical (SMS) College and Hospital.

Material & Methods
Study Approval: This study was conducted at Institute of Respiratory Disease (IRD), Swai Mansingh (SMS) Medical Collage, Jaipur after taking necessary permission from Ethical Committee and Research Review Board of SMS Medical College, Jaipur.

Study area: Institute of Respiratory Diseases (IRD) SMS Medical College, Jaipur. Study duration: One year or till the desired sample size was achieved (whichever is earlier).

Study design: Hospital based cross sectional study. Sample Size- All the cases of carcinoma lung reported at Institute of Respiratory Disease SMS Medical College from 1.07.2019 to 30.06.2020 was included in the study to assess the socio-demographic profile.

Study Population: All patients of Lung cancer attending at Institute of Respiratory Diseases (IRD), Swai Mansingh Medical Collage (SMS), Jaipur.

Inclusion Criteria:
Patients documented to have primary lung carcinoma by respective diagnostic modalities.
Patients who give informed consent

Exclusion Criteria:
Patients with metastasis from extra thoracic sites
Patients who do not give consents for various diagnostic and interventional procedure

Statistical analysis:
Descriptive and Inferential statistical analysis has been carried out in the present study using computer software.
The qualitative data were expressed in number and percentages and the quantitative data expressed as mean and standard deviations. Association was analyzed by using chi square test. Significance level for tests was determined as 95% (P< 0.05)

### Results

In this section, an attempt was made to provide glimpse of socio-demographic profile of the respondents covering age, gender, income, occupation, Socio-economic status etc. based on the information collected from patients.

#### Table 1:

| Profile                              | Frequency | Percentage |
|--------------------------------------|-----------|------------|
| **Age groups**                       |           |            |
| 41-50                                | 9         | 8.6        |
| 51-60                                | 39        | 37.1       |
| 61-70                                | 51        | 48.6       |
| >70                                  | 6         | 5.7        |
| **Mean age**                         |           | 61.4±6.8 yrs |
| **Sex**                              |           |            |
| Male                                 | 90        | 14.3       |
| Female                               | 15        | 85.7       |
| **Area**                             |           |            |
| Rural                                | 76        | 72.4       |
| Urban                                | 29        | 27.6       |
| **Occupation**                       |           |            |
| Business                             | 4         | 3.0        |
| Mine workers                         | 5         | 4.8        |
| House wife                           | 5         | 4.8        |
| Job                                  | 6         | 5.7        |
| Factory workers                      | 8         | 7.6        |
| Farmer                               | 38        | 36.2       |
| Labourer                             | 39        | 37.1       |
| **Education**                        |           |            |
| Illiterate                           | 6         | 5.7        |
| Primary school                       | 38        | 36.2       |
| Middle school                        | 28        | 26.7       |
| High school                          | 27        | 25.7       |
| Graduate                             | 6         | 5.7        |
| **Socio-economic status**            |           |            |
| Lower                                | 13        | 12.4       |
| Upper lower                          | 76        | 72.4       |
| Lower middle                         | 13        | 12.4       |
| Upper middle                         | 3         | 2.9        |
| Upper                                | 0         | 0          |

It is indicated that about 48.6 % of the patients were belonging to age group of 60-70 while 37.1% from age group between 50 to 60 followed by 40-50 and >70 which was 8.6 and 5.0 percent respectively. Mean age of the patients was 61.4±6.8; it was higher in male 61.60±6.7. Out of 105 patients majority of patients were (85.7 %) male. Most of the patients (72.4%) were belonged to rural area .In context of education it is indicated that about 36 % of the patients were primary school educated while 25.7 to 26.7 constituted high & middle school respectively followed by graduate & illiterates (5.7 %) respectively. In regard to occupation, a about one third of the patients (36.2 & 37.1 percent) were farmers and labours respectively, while 7.6 % were factory worker, 5.7 % were doing job followed by House wife & mine worker (4.8%) respectively. The data on monthly income of the patients indicates that most of the patients 81.9 percent have income less than 10001 while 11.4 % had income between 10002-29972 monthly. On the basis of Kuppuswamy’s socio-economic status scale 2020 our data reveals that more than 70 % patients belonged to Upper lower class while 12.4 % were from lower and lower middle class followed by Upper Middle class (2.9 percent).
Discussion

In our study most of the patients were of age group 50 to 70. The average age of patients was 61.4 years, and this was slightly higher than Choudhary CR et al.5 with mean age 57.50 years and other study of Dey A et al.9 while in Anurag Agrawal MD et al. study mean age was 63.3 years, and 64 % of the patients belonged to age group 50-70 years. The possible reason for this is that lung cancer is the disease of elderly age group and there is cumulative effect of prolonged exposure to risk factors and poor awareness.

On the other hand other reason for the slight change in mean age among various study was due to different geographical variation. In our study, majority of patients were male (85.7 %) and the male to female ratio was 6:1 which was more than study of Dey A et al.(4.14:1), Choudhary CR et al.(5.8:1) and in Anurag Agrawal MD et al. study ratio was (4.7:1) while in contrary to this, study of Mandal SK et al.8 showed M:F ratio (1.1:1). This might be due to the fact that males tend to seek medical attention more frequently than female in our society.

Though in our study, there was no major difference in mean age of lung cancer diagnosis for male and female, it was similar to study of Dey A et al.9 Choudhary CR et al.5 Mandal SK et al.7 The mean age of females was one year less than males in study conducted by Radzikowska E et al.9 & study of Zang EA et al.10 concluded that women’s develop lung cancer at younger age than males. A similar study done by Visbal AL et al.10 suggested that despite low prevalence of smoking, women were diagnosed on an average two year younger than males. Ramana Kumar AV et al.11 observed the high odds ratio for women as compared to men exposed to both traditional cooking and heating sources and in the study oriental women shown to be at increased risk for lung cancer, in particular adenocarcinoma, which was attributed to prolonged and concentrated exposure stove cooking and heating sources. In our study, majority of patients (72.4%) were from rural area, belonging to Upper lower class (70.0%) about 36 % of the patients were primary school educated while 25.7 to 26.7 constituted high & middle school respectively. In regard to occupation, about one third of the patients were farmers and labourers respectively. Study done by Kshetrimayum S et al.12 confirms the similar trend.

Conclusion

We concluded that lung cancer was commonly found in elderly male belong to low socio-economic status.

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