



A STUDY OF TUBERCULAR DESTROYED LUNG DISEASE

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ABSTRACT

Background- Destroyed lung is a lung condition commonly caused by tuberculosis. Other causes include bronchiectasis, aspergilloma, emphysema, etc. It is characterized by extensive lung destruction and reduced lung function. Chest X-ray, chest CT, bronchography, and ventilation-perfusion ratio scan are the commonest radiologic diagnostic tools. Treatment of choice may include pneumonectomy. The study aims to highlight the common causes of destroyed lung and the major presenting complaints based on age, sex and affected lungs. **Material & Method-** This is an observational study conducted in Government Medical College Datia in 2019. Consent and all permission were taken placed. 30 cases were included in study whom diagnosis of destructive lung was made by using radiologic criteria. The major presenting complaint for destroyed lung was noted, however, we focused on respiratory failure and hemoptysis in our analysis because of its potential prognostic implications. Distribution of destroyed lung cases were noted across, sex and age groups. Destroyed lung was classified according to which lung (s) was/were affected. For the purpose of the study: right lung, left lung or bilateral. The underlying disease history of Diabetes and Pulmonary tuberculosis was taken. **Results-** Total cases of study – 30, Male -12 (40%), Female-18 (60%), Above 40 years age group patient 24 (80%) and below 40 years were 06 (20%), left destroyed lung 21(70%) right destroyed lung 09 (30%), Cough and respiratory failure (Breathlessness) were present in 22(73.33%) cases & hemoptysis in 08 (26.66%) cases. Old pulmonary tuberculosis-29 (96.67%) cases Diabetes present in 07(23.33%) cases. Non smoker- 19 (63.33%) & only 11 male patient 11(36.67%) were smoker. **Conclusion-** In this study Tuberculosis seem to be the commonest causes of destroyed lung, with left sided affection being more predominant.

KEYWORDS : Destroyed Lung, Tuberculosis, Bronchiectasis, Aspergilloma,**INTRODUCTION**

Destroyed lung is a term used to describe extensive destruction of the lungs (1). Usually noted in radiological studies and characterized by markedly reduced ventilation to perfusion ratio. Destroyed lung is often caused by inflammatory diseases; the commonest being tuberculosis (2,3). Other causes include bronchiectasis, emphysema, aspergilloma, and pneumonia. Complications of destroyed lungs often include irreversible respiratory insufficiency, massive hemoptysis, empyema, secondary fungal infections, septicaemia and left-right shunt(4). The contralateral lungs may show hyperinflation. Chest X-ray, chest CT, bronchography, and ventilation-perfusion ratio scan are the commonest radiologic diagnostic tools (5). Chest X-ray findings in affected lungs show, diffuse opacity with multiple cavities or a large single cavity. Although, a high-risk procedure, pneumonectomy may be indicated in the management of destroyed lungs to either resolve or prevent complications.

MATERIALS & METHOD

This is an observational study conducted in Government Medical College Datia in 2019. Consent and all permission taken. 30 cases were included in study whom diagnosis of destructive lung was made by using radiologic criteria. The major presenting complaint for destroyed lung was noted, however, we focused on respiratory failure and hemoptysis in our analysis because of its potential prognostic implications. Distribution of destroyed lung cases were noted across, sex and age groups. Destroyed lung was classified according to which lung (s) was/were affected. For the purpose of the study: right lung, left lung or bilateral. The underlying disease history of Diabetes and Pulmonary tuberculosis was taken.

RESULTS**Table-1 Sex wise distribution**

Sex	Number of cases
Male	12 (40%)
Female	18 (60%)
Total	30

Table 2 -Age wise distribution

Age group in years	Number of cases
Below 40	06 (20%)
Above 40	24 (80%)

Table 3- Side of destroyed lung

Side of destroyed lung	Number of cases
Left Destroyed Lung	21(70%)
Right Destroyed Lung	09(30%)

4. Clinical presentation-

Cough and respiratory failure (Breathlessness) were present in 22(73.33%) cases & hemoptysis in 08 (26.66%) cases.

5. Associated comorbidity –

Old pulmonary tuberculosis-29 (96.67%) cases, Diabetes melitus present in 07(23.33%) cases.

6. Smoking history-

Non smoker- 19 (63.33%) in which 18 Females and one male. Smoker- only 11 male patient (36.67%).

DISCUSSION-

In our study 21 (70%) were left destroyed lung and 09 (30%) were right destroyed lung. More significant differences are noted in other studies: Mısırlıoğlu AK *et al.* showed 74.4% left lung affection and Rajasekaran S showed 81.8% left lung affection (6). In our study all cases of tubercular destroyed lung were taken. Some studies mention tuberculosis as the commonest cause of destroyed lung. However, bronchiectasis has been implicated in some research as the most common underlying condition leading to destroyed lung. Sayir F. *et al.* implicated bronchiectasis in 62.5% of cases and tuberculosis in 28.1% of cases (7). Mısırlıoğlu AK *et al.* implicated bronchiectasis and tuberculosis in 51% and 34% of cases, respectively. Halezeroglu S. *et al.* and Eren Ş. *et al.*, also had bronchiectasis as the most common underlying disease in destroyed lung (10). Hemoptysis and respiratory failure has been a recurring entity in destroyed lung, across studies (8,9). Moreso, respiratory failure, as it can be used to predict prognosis.

CONCLUSION

Overall, destroyed lung is generally caused by chronic lung infection, the commonest cause being tuberculosis and pneumonia. Affection of the left lung is more common compared to the right, and occurs more in males, according to our study. Respiratory failure seems to be a more common presentation compared to hemoptysis.

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