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ORIGINAL ARTICLE

Assessment of cases of interstitial lung disease

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ABSTRACT:

Background: ILD, or interstitial lung disease, is a large category of lung diseases that comprises about 130 conditions marked by lung inflammation and/or scarring, or "fibrosis." The present study was conducted to assess cases of interstitial lung disease. **Materials &Methods:** 60 cases of ILD of both genderswas recorded. Clinical spectrum was recorded. All underwent HRCT. Laboratory investigation such as ESR, WBC, ANA etc. was recorded. **Results:** Out of 60 cases, 34 were males and 26 were females. Type of ILD was sarcoidosis in 12, idiopathic pulmonary fibrosis in 28, extrinsic allergic alveolitis in 7, ILD secondary to collagen vascular diseasein 4, cryptogenic organising pneumonia in 3, eosinophilic pneumonia in 2 and lymphocytic interstitial pneumonia 4 cases. The difference was significant (P< 0.05). Clinical features were chest pain in 43, haemoptysis in 17, bilateral swelling of lower limbs in 15, ascites in 23 and cor-pulmonale in 19 cases. The difference was significant (P< 0.05). **Conclusion:** In India, ILDs are not uncommon. Inadequate diagnostic resources, like as bronchoscopy and HRCT, along with a lack of awareness could account for the dearth of Indian series on this topic.

Keywords: sarcoidosis, interstitial lung disease,chest pain

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INTRODUCTION

ILD, or interstitial lung disease, is a large category of lung diseases that comprises about 130 conditions marked by lung inflammation and/or scarring, or "fibrosis." Fifteen percent of the cases that pulmonologists (specialists in the lung) see are related to ILD.[1] Lung tissue can become inflamed and/or scarred when someone has ILD. The space inside and around the tiny blood arteries and alveoli (air sacs) in the lung is known as the interstitium. This is the location of the carbon dioxide and oxygen exchange. This tissue is disrupted by interstitium inflammation and scarring. This causes the lungs' capacity to take in oxygen from the surrounding air to diminish.[2]

There is a paucity of data on ILD in India, where these diseases are under-estimated and remain under-diagnosed and under-reported for various reasons.[3] This is probably due to lack of awareness among physicians, and lack of availability of diagnostic modalities like computed tomography (CT), bronchoscopy and video-assisted thoracoscopic surgery (VATS) and the high cost involved in getting these investigations done.[4] Tuberculosis (TB) mimics some of the ILDs, like sarcoidosis, leading to diagnostic errors and delays. Thus, the incidence of ILDs in the developing countries has been considerably under-estimated.[5]The present study was conducted to assess cases of interstitial lung disease.

MATERIALS & METHODS

The study was carried outon 60 cases of ILD of both genders.All gave their written consent to participate in the study.

Data such as name, age, gender etc. was recorded. Clinical spectrum was recorded. All underwent HRCT. Laboratory investigation such as ESR, WBC, ANA etc. was recorded. Results thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table IDistribution of patients

Total- 60		
Gender	**Male**	**Female**
Number	34	26

Table I shows that out of 60 cases, 34 were males and 26 were females.

Table II Clinical spectrum of ILD

Type of ILD	Number	P value
Sarcoidosis	12	0.01
Idiopathic pulmonary fibrosis	28	

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Extrinsic allergic alveolitis	7	
ILD secondary to collagen vasculardisease	4	
Cryptogenic organising pneumonia	3	
Eosinophilic pneumonia	2	
Lymphocytic interstitial pneumonia	4	

Table II, graph I shows that type of ILD was sarcoidosis in 12, idiopathic pulmonary fibrosis in 28, extrinsic allergic alveolitis in 7, ILD secondary to collagen vascular disease in 4, cryptogenic organising pneumonia in 3, eosinophilic pneumonia in 2 and lymphocytic interstitial pneumonia 4 cases. The difference was significant (P< 0.05).

Graph I Clinical spectrum of ILD

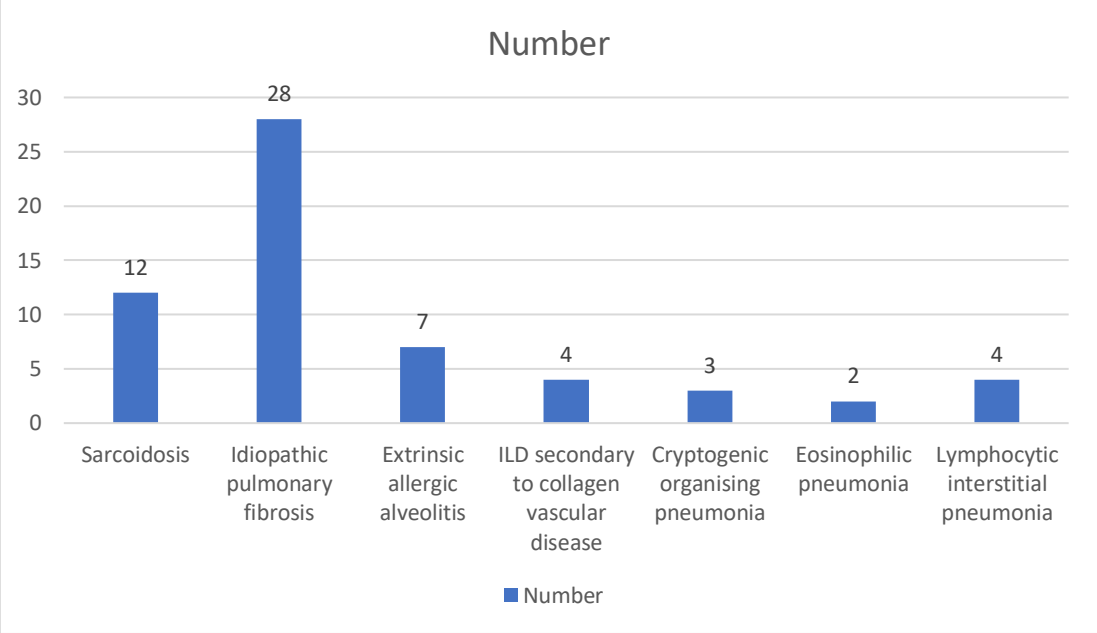

Table III Clinical features

Clinical features	Number	P value
Chest pain	43	0.43
Haemoptysis	17	
bilateral swelling of lower limbs	15	
ascites	23	
cor-pulmonale	19	

Table III shows that clinical features were chest pain in 43, haemoptysis in 17, bilateral swelling of lower limbs in 15, ascites in 23 and cor-pulmonale in 19 cases. The difference was significant (P< 0.05).

DISCUSSION

ILD progresses differently in each individual and in different diseases. It is critical to identify each person's unique form of ILD since the underlying cause can affect both the course of treatment and the outcome over time.[6] Your doctor needs to keep an eye on your therapy because every person reacts to medication differently.[7] It is possible to differentiate interstitial lung disease (IPD) from other conditions with a UIP pattern of fibrosis using a number of radiological and histological indicators, but understanding them requires a thorough understanding of ILD and an integrated multidisciplinary approach involving pulmonologists, rheumatologists, radiologists, and pathologists.[8]The present study was conducted to assess cases of interstitial lung disease.

We found that out of 60 cases, 34 were males and 26 were females. Sen et al[9]retrospectively analyzed medical records of 274 patients with biopsy proven ILD seen during the period 1994-2001 at our tertiary care referral hospital. Idiopathic pulmonary fibrosis (43%), sarcoidosis (22%), ILDs secondary to collagen vascular disease (19%) and extrinsic allergic alveolitis, among others, were the most common aetiological causes of ILD. The diagnostic yield from transbronchial lung biopsy (TBLB) was high (96%).

We found that type of ILD was sarcoidosis in 12, idiopathic pulmonary fibrosis in 28, extrinsic allergic alveolitis in 7, ILD secondary to collagen vascular disease in4,cryptogenic organising pneumonia in 3, eosinophilic pneumonia in 2 and lymphocytic interstitial pneumonia in 4 cases. Carnochan et al[10] in their study video assisted thoracoscopic lung biopsies

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were compared with historical controls undergoing open lung biopsy to determine the diagnostic accuracy, effect on length of postoperative stay, and cost effectiveness of the new thoracoscopic technique.The first 25 video assisted thoracoscopic lung biopsies performed in the Edinburgh Thoracic Unit were compared with 25 historical controls for complications, diagnostic accuracy, and length of postoperative stay.Statistical comparison showed equal diagnostic accuracy in both groups (96% v 92%), but mean (SD) inpatient stay was reduced in the video assisted thoracoscopic group (1.4 (0.7) days) compared with those undergoing open lung biopsy (3.1 (1.8) days). No postoperative complications were reported in the group which underwent video assisted thoracoscopic lung biopsies but three patients had postoperative complications in the open lung biopsy group.

We found that clinical features were chest pain in 43, haemoptysis in 17, bilateral swelling of lower limbs in 15, ascitesin 23 and cor-pulmonale in 19 cases. In patients with biopsy-proven IIP, Corte et al[11] investigated the clinical and prognostic utility of a diagnosis of undifferentiated CTD (UCTD). From 1979 to 2005, IIP patients receiving surgical lung biopsies (NSIP, nonspecific interstitial pneumonia) were investigated. Serum autoantibodies were indicative of UCTD when they were accompanied by symptoms or indicators of CTD. An assessment was conducted on the correlation between UCTD and NSIP histology. Using a priori factors, a clinical algorithm that best predicted NSIP histology was created. This algorithm's and UCTD's prognostic usefulness was assessed. Seven (13%) IPF patients and 14 (31%) NSIP patients had UCTD. There was no survival benefit linked to UCTD. The absence of typical high-resolution computed tomography (HRCT) features for IPF and either 1) a compatible demographic profile (females <50 years old) or 2) Raynaud's phenomenon included the algorithm predictive of NSIP (OR 10.4, 95% CI 3.21-33.67; $p<0.0001$). This method, regardless of IIP severity, predicted better survival (hazard ratio 0.35, 95% CI 0.14-0.85) in patients whose HRCT scan was not typical for IPF. In NSIP histology, UCTD is linked. Uncertainty persists regarding the diagnostic and prognostic importance of UCTD in IIP patients.

The shortcoming of the study is small sample size.

CONCLUSION

Authors found that in India, ILDs are not uncommon. Inadequate diagnostic resources, like as bronchoscopy and HRCT, along with a lack of awareness could account for the dearth of Indian series on this topic.

REFERENCES

1. Romagnoli M, Nannini C, Piciucchi S. Idiopathic nonspecific interstitial pneumonia: aninterstitial lung disease associated with autoimmune disorders? Eur RespirJ. 2011;38(02):384–391.
2. Sato T, Fujita J, Yamadori I. Non-specific interstitial pneumonia; as the first clinicalpresentation of various collagen vascular disorders. RheumatolInt. 2006;26(06):551–555.
3. Joint statement of the American Thoracic Society (ATS) and the European Respiratory Society (ERS). ATS/ERS international multidisciplinary consensus classification of the idiopathic interstitial pneumonias. Am J Respir Crit Care Med 2002;165:277-304.
4. Cottin V. Interstitial lung disease: are we missing formes frustes of connective tissuedisease? Eur Respir J. 2006;28(05):893–896
5. Jindal S K, Malik S K, Deodhar S D, Sharma B K. Fibrosing alveolitis: a report of 61cases seen over the past five years. Indian J Chest Dis AlliedSci. 1979;21(04):174–179.
6. Jindal SK, Gupta D. Incidence and recognition of interstitial pulmonary fibrosis in developing countries. Curr OpinPulmon Med 1997;3:378-83.
7. Sharma SK, Pande JN, Guleria JS. Diffuse interstitial pulmonary fibrosis. Indian J Chest Dis Allied Sci 1984;26:214-9.
8. Gupta D, Behra D, Joshi K, Jindal SK. Role of fiberoptic bronchoscopy (transbronchial lung biopsy) in diagnosis of parenchymal lung disease. J Assoc Physicians India 1997;45:371-3.
9. Sen T, Udwadia Z F. Retrospective study of interstitial lung disease in a tertiary carecentre in India. Indian J Chest Dis Allied Sci. 2010;52(04):207–211.
10. Carnochan FM, Walker WS, Cameron EW. Efficacy of video assisted thoracoscopic lung biopsy: an historical comparison with open lung biopsy. Thorax. 1994 Apr 1;49(4):361-3.
11. Corte T J, Copley S J, Desai S R. Significance of connective tissue disease features inidiopathic interstitial pneumonia. Eur Respir J. 2012;39(03):661–668.