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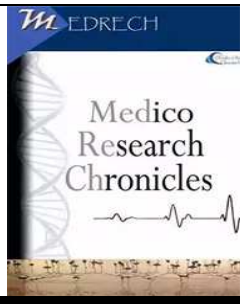

ASSESSMENT OF PSYCHIATRIC CO-MORBIDITIES IN PATIENT OF INTERSTITIAL LUNG DISEASE ATTENDING A TERTIARY MEDICAL CENTRE

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ABSTRACT

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Aims and Objectives: Interstitial lung disease (ILD) is a diverse group of conditions that are characterized by inflammation and fibrosis of the pulmonary parenchyma. In general, ILD is chronic and progressive diseases that result in substantial morbidity and mortality. The cardinal symptom of ILD is dyspnea; however, other pulmonary and extra-pulmonary symptoms are often present [1]. ILD is a common respiratory illness, in which some of the disease-related factors may increase the vulnerability to psychiatric disorders. This study was done to determine the prevalence of psychiatric co-morbidity in patients of ILD.

Methodology: It is an observational study conducted in 110 follow-up patients of Interstitial lung disease attending respiratory medicine OPD at a tertiary care center in central India. Psychiatric comorbidities are assessed by pre-designed short structured questionnaire using Mini international neuropsychiatric interview.

Result: Among 110 patients of ILD 28% had psychiatric co-morbidity

mainly depressive episode (59%) . A significant association is found between upper socioeconomic status (P =0.01), duration of active illness (more than 1 year) (P =0.001), and age of patient between 40 to 60 years (P =0.001) with psychiatric co-morbidity of ILD patient.

Conclusion: Our study shows there is increased prevalence of psychiatric co-morbidities in patients of ILD, higher than the national average. The predominant psychiatric disorder seen is depressive disorder, so treatment of ILD should be a multidisciplinary approach including medical treatment of ILD and psychiatric evaluation to prevent psychiatric co- morbidity or its early management. This will greatly reduce the morbidity, visits to hospital, expenditure on treatment and thereby having better outcomes in our patients of ILD.

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INTRODUCTION

Interstitial lung disease (ILD) is a heterogeneous condition characterized by alveolar interstitial damage, severe airways limitation, impaired gas exchange, impaired quality of life, and reduced exercise capacity [1]. ILD is an umbrella term including idiopathic pulmonary fibrosis, asbestosis, hypersensitivity pneumonitis, and connective tissue disease-related ILD, among others. A significant proportion of ILD patients live with two or more comorbidities and an increasing disease burden with frequent hospital admissions and premature mortality [2–4]. ILD patients experience symptoms of chronic dyspnea on exertion, cough, fatigue, pain, and reduced physical functioning in their activities of daily living (ADL).

Depression is a common comorbidity of many chronic diseases and directly impacts the quality of life [5]. Comorbid depression has also been shown to predict future development of clinically relevant outcomes in several chronic diseases, including increased mortality [6]. Depression and anxiety are highly prevalent in ILD patients compared to the general population, with a range of estimates for both depression (14% to 49%) and anxiety (21% to 60%) [7–13].

The present study was designed to determine the prevalence and impact of anxiety and depression in patients with ILD. Furthermore, it explores the interventions (e.g. pulmonary rehabilitation and antidepressant drug therapy) utilized for the treatment of anxiety and depression in patients with ILD at a tertiary health care center.

MATERIALS AND METHODS

It is an observational study conducted in 110 follow-up patients of Interstitial lung disease attending respiratory medicine OPD at a tertiary care center in central India [33 patients from Varun Arjun Medical College, Shahjahanpur;2 patients from S.N. Medical college, Agra;25 patients from FH Medical college, Tundla to find out psychiatric co-morbidities between March 2018 to April 2019.

Criteria for inclusion

- Clinically and radiologically known cases of ILD.
- Stable follow-up bronchial ILD patients.
- Patient above18 years of age
- Patients who can give informed consent.

Criteria for exclusion

- Patients who are not able to give informed consent.
- Other Medical illnesses (thyroid disorders, diabetes, hypertension, COPD,)

They were assessed with the semi-structured performa containing details of socio-demographic profiles and questions about the aims of the study. Psychiatric comorbidities are assessed by a short structured questionnaire using Mini international neuropsychiatric interview.

Table:1 Age Profile of ILD Patients

Age	Number of Patients	Percentage
18-40 yrs	25	22
41-60 yrs	55	50
60 or above	30	28
Total	110	100

Table :2 Sex Profile of ILD Patients

Sex	Patients	Percentage
Male	52	48
Female	58	52
Total	110	100

Table: 3 Socioeconomic Status of ILD Patients

Socioeconomic Class	Patients	Percentage
Upper Class	67	62
Middle Class	36	32
Lower Class	7	6
Total	110	100

Table:4 Clinical Profile of ILD Patients

Duration of Active Illness	Patients	Percentage
Less than 6 months	2	1.8%
6 months to 1 year	4	3.6%
More than 1 years	104	94.5%
Total	110	100

Table:5 ILD Patients With Psychiatry Comorbidities

	Number	Percentage
Patient with psychiatry co-morbidities and ILD	**31**	**28**
Patient without psychiatry co-morbidity but only ILD	**79**	**72**
Total	**110**	**100**

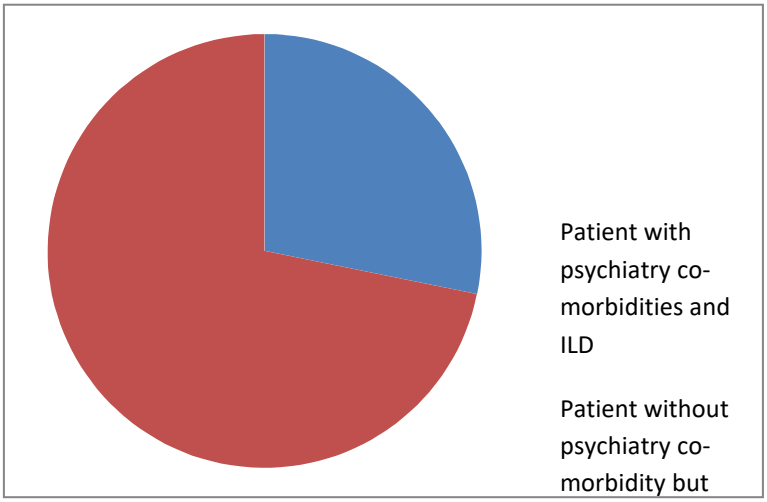

Table:6 Various Psychiatric Comorbidities in ILD Patients

Psychiatry Co-morbidity	Number of patients	Percentage
Depressive Episode	18	59
Manic Episode	2	6
Generalized Anxiety Disorder	6	20
Alcohol Dependence	4	12
Suicidal Tendency	1	3
Total	31	100

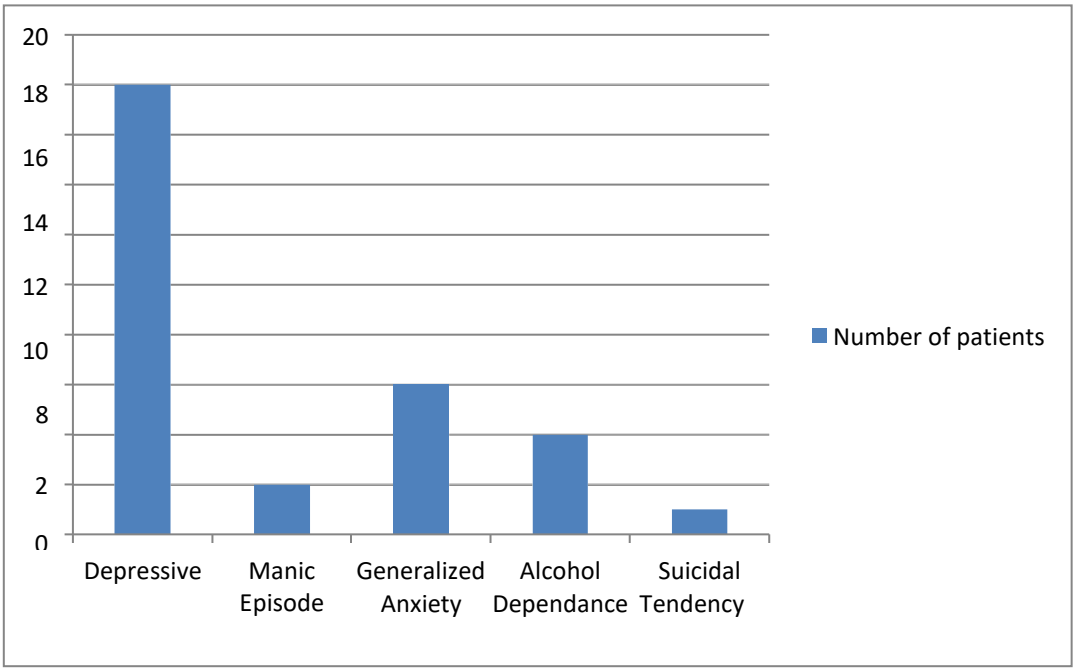

Table:7 Socio clinical correlation of ILD patient with psychiatric comorbidities

Variables	Chi-Square value	P-value
Age of patients	19.77	0.001
Sex	2.6	0.1
Socioeconomic status	8.58	0.01
Duration of active illness	13.62	0.0011

RESULT

In our study, among 110 patients of ILD, 50% of patients belong to 41 to 60 years, 22% belong to 18 to 40 years and 28% belong to above 60 years [Table 1]

In our study, among 110 patients of ILD 52% are females and 48% belong to male [table2]

In our study, among 110 patients of ILD 62% belongs to upper socioeconomic class, 32% belong to the middle class and 6% belong to lower socioeconomic class [Table 3]

In our study, among 110 patients of ILD, number of active illness below 6 months is 1.8%, number of active illness below 6 months to 1 year is 3.6% and number of active illness above 1 year is 94.5% [Table 4]

Among the 110 patients of ILD, 28% have psychiatric co-morbidity and 72 % does not have psychiatric comorbidity [table 5]

In psychiatric co-morbidity depressive episode (59%) are most common followed by anxiety disorder (20%), alcohol dependence (12%), manic episodes (6%) and suicidal tendency (3%)[Table 6]

A significant association is found between upper socioeconomic status (P =0.01), duration of active illness more than 1year (P =0.0011), and age of patient between 40 to 60 years (P =0.001) with psychiatric co-morbidity of ILD patient.[table 7]

DISCUSSION

In our study, it is found that 28% of ILD patients have psychiatric co-morbidity. This prevalence is much higher than the national average of 14%[11] of psychiatric disorders in the general population, highlighting the fact that psychiatric disorders are found to be increased in patients with ILD. Kunik et al. [14] and Taghreed et al. [15] found that the prevalence of depression in patients with ILD was (65%) and (73.3%), respectively which is much higher than our study. While Ryerson et al. [8,] and Ryerson et al. [10] found that, the prevalence of depression in patients with ILD was 23% and 21%, respectively which were consistent with our study.

In our study, the most common psychiatric co-morbidity is a depressive episode (59%), followed by anxiety disorder (20%). Although no previous studies reported psychiatric disorders in ILD patients with pulmonary hypertension. Lo¨we et al. [16] found that 35% of the patients with ILD suffered from mental disorders, with the most common being major depressive disorder (15.9%) and panic disorder (10.4%) which is quite similar to our study findings.

In our study, ILD patients between 40 to 60 years of age are more predisposed to develop psychiatric co-morbidity. It is concordance with the study reported by Taghreed et al. [15] as they found that the mean ±SD age among the ILD patients was 48.30± 12.60 years. While Lindell et al. [17], Ryerson et al. [10], found that the mean± SD age among the ILD patients was 66.19±10.93, 63.90±11.60 years, respectively.

In our study, gender does have a significant association of developing psychiatric comorbidities in ILD patients (females >males), it is concordance with Taghreed et al [15] as they found that female

ILD patients are more prone to develop depression than males. While Ryerson et al. [8] and Ryerson et al. [10] in contrast found that males were more common than females among the ILD patients (56% vs 44%), (56% vs 44%), respectively.

In our study, ILD patients with upper-class socioeconomic status are more predisposed to develop psychiatric comorbidities. No, any study supported our finding but a study conducted by Taghreed et al [15] shows socioeconomic status does not have a significant association with psychiatric co-morbidity studies.

In our study ILD patients having a longer duration of active illness [more than 1 year] are more prone to develop psychiatric comorbidity, it is similar to Taghreed et al[15] studies and Ryerson et al [8] studies. The reason for this finding can be prolonged illness causes more morbidity, repeated hospital visits, increased expenditure on treatment, and loss of work resulting in financial loss. This needs to be further assessed in more studies depicting the reason for this finding.

CONCLUSION

Our study shows there is an increased prevalence of psychiatric co-morbidities in patients of ILD, higher than the national average. The predominant psychiatric disorder seen is a depressive disorder. Psychiatric co-morbidity is found to have a significant association with upper socioeconomic status, age between 40 to 60 years, and duration of active illness more than 1 year, so there is a need for assessment of the psychiatric co-morbid conditions in ILD patients to improve the quality of life. Further treatment of ILD should be a multidisciplinary approach including medical treatment and psychiatric evaluation to prevent psychiatric co-morbidity or its early management including pulmonary rehabilitation. This will greatly reduce the morbidity, visits to hospitals, expenditure on treatment and thereby having better outcomes in our patients of ILD. Further study is required to find out more factors for a higher prevalence of psychiatric comorbidities in patients with ILD.

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