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Research Article

**A STUDY ON THE MISDIAGNOSIS OF TUBERCULOSIS IN
THE PATIENTS SUFFERING FROM INTERSTITIAL LUNG
DISEASE**¹Dr Tayyaba Fatima, ²Dr Rabiya Fatima, ³Dr M. Bilal Jehangir¹Mayo Hospital Lahore, ²Military Hospital Rawalpindi, ³Benazir Bhutto Hospital Rawalpindi.**Article Received:** August 2019**Accepted:** September 2019**Published:** October 2019**Abstract:**

Objective: The objective of this research work was to find out the rate of occurrence of misdiagnosis of Tuberculosis among patients suffering from Interstitial Lung Disease.

Methodology: This study was a prospective research work and conducted in Mayo hospital Lahore in March to May of 2017. We confirmed the Tuberculosis Diagnosis only when we found the bacteriological proofs of TUBERCULOSIS at diagnosis time or if we found the betterment in the symptoms after the therapy among patients identified as having tuberculosis on medical findings.

Results: There were total 73 patients in this research work, there were 70.4% (n: 53) female patients & 25.36% (n: 20) patients were males. The treatment of the tuberculosis was in progress before appearance in 36.33% (n: 28) patients suffering from Interstitial Lung Disease. Excluding only 2 patients with silicosis who were present with the smear positive Tuberculosis, there was misdiagnosis of all remaining patients of having Tuberculosis.

Conclusion: This is very frequent for the abnormalities of Interstitial Lung Disease to be misidentified & misdiagnosed. The most frequent confusion of this disease is with tuberculosis. Compete awareness about the Interstitial Lung Disease is necessary for the physicians of the primary care, particularly in various countries with very high burden of the tuberculosis, to limit the mistreatment with the medicines of anti-tuberculous drugs when there is no need of those medicines and in time referrals to the concern departments.

Keywords: Mistreatment, Diagnosis, Misdiagnosis, Tuberculosis, Silicosis, Abnormalities.

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INTRODUCTION:

Interstitial Lung Diseases are a combination of many diseases that normally have influence on the parenchyma of lung. There are a variety of the reasons, symptoms as well as features of histology. About more than 180 entities are present in this group of the diseases, IPF (Idiopathic Pulmonary Fibrosis) is the most common complication. The data regarding the interstitial lung diseases in our country Pakistan, due to misdiagnosis or under estimation of these diseases. The main reason behind this issue is the deficiency of knowledge among doctors and very expensive modalities of diagnostic. The interaction among the professionals of various clinical field can improve the confidence regarding diagnosis. Majority of the interstitial lung diseases handle a dismal prognosis with median time of survival for idiopathic pulmonary fibrosis of 2-3 years from the diagnosis time. There is no straight diagnosis in majority of the cases, not amazingly, greater than 48.0% patients are the victim of misdiagnosis with other types of the illness of respiratory system in time of identification and referrals of such patients to the main health care departments may lead to the highly optimal management of the disease.

MTB (Mycobacterium Tuberculosis) is very frequent reason of the chronic infections of lungs in the whole world. In various research work conducted in past, investigated the patients suffering from idiopathic chronic Interstitial Lung Disease, the rate of the positive culture for mycobacterium tuberculosis was from 3.0% to 4.18%. This diagnosed prevalence was four to five times greater than that of the normal public at the same time in the same region. Tuberculosis has many similar medical features of Interstitial Lung Disease, which is main cause of the delays or the misdiagnosis. There are many cases from the country of Africa where complications of Interstitial Lung Diseases, particularly IPF were not correctly diagnosed and administered as Tuberculosis for long times. Pakistan is on fifth number in the ranking among twenty-two countries with very high burden of the epidemic of tuberculosis. The prevalence of the Tuberculosis is 268 per 100000 people. The mortality because of Tuberculosis is 23 per

100000 people. There is no data exists in our country about this complication, so this research work conducted to examine the rate of occurrence of the Interstitial Lung Diseases diagnosed as Tuberculosis, which was wrong diagnosis.

METHODOLOGY:

This was a prospective research work which contained all the patients who visited the Mayo Hospital, Lahore from March to May 2017. The complete medical history of past, medical examination, HRCT findings of the constant with the Interstitial Lung Disease, serological methods and the response or reaction of the patients to the immune-suppressive therapy were very helpful for the identification of the complications of Interstitial Lung Diseases. Among patients in whom there was probability of the other diseases excluding Interstitial Lung Diseases, we performed bronchoscopy with lavage \pm biopsy to identify the acute results.

We gave the confirmation of tuberculosis if we found a document for the positive smear or some bacteriological indication when the diagnosis of the tuberculosis carried out. For those patients who got treatment for the smear negative tuberculosis, we refuted the diagnosis of tuberculosis if the clinical history & features of the radiology were not constant with tuberculosis and all these patients gave no response to these anti-tuberculosis medicines. SPSS V.23 was in use for the statistical analysis of the collected information. The calculation of the frequencies & percentages carried out for the presentation of the quantitative data of different variables. The ethical committee of the hospital gave the permission to conduct this research work. We took the written consent from every patient to ensure their participation in the research work.

RESULTS:

There were total 73 patients in this research work in which 70.4% (n: 53) patients were females & 25.36% (n: 20) patients were from male gender. The average age of the patients of this research work was 46.89 with a range from seventeen years to eighty years. The treatment of the interstitial lung disease carried out as tuberculosis before appearance to the clinic of interstitial lung

diseases in 36.33% (n: 28) of patients. The rate of occurrence of misdiagnosis of tuberculosis in

case of common interstitial lung diseases is present in Table-1.

Table-I: Frequency Of Interstitial Lung Diseases Treated as Tuberculosis Before Presentation to Interstitial Lung Disease Clinic

Interstitial Lung Disease	Number of cases	Cases Treated As Tuberculosis Before Presenting To Interstitial Lung Disease Clinic	
		Frequency	Percentage
IPF	32.0	19.0	63.60
NSIP	26.0	2.0	5.67
Sarcoidosis	5.0	1.0	18.00
Silicosis	3.0	3.0	98.00
Hypersensitivity pneumonitis	7.0	1.0	12.26

Among the patients of Interstitial Lung Disease, only two patients who were present with diagnosis of silicosis had the positive smear for Tuberculosis in the previous checkups and they got treatment for the complication of Tuberculosis. All the remaining patients misdiagnosed in early stage as present with Tuberculosis and they got anti-Tuberculosis therapy but there was not improvement in the symptoms of complication of the present disease.

DISCUSSION:

Professionals of primary health care normally consider tuberculosis as a reason of the symptoms for interstitial lung diseases. As elaborated in the current research work, the management of the 36.33% patients who were present with the chronic interstitial lung diseases carried out in the past with no presence of tuberculosis, even physician observed no progress in the improvement of the symptoms for the disease among patients. Only 2 patients got the right treatment of having tuberculosis, the diagnosis of both patients carried out later of present with the silicosis. It is well-known reality of the increased danger of the tuberculosis in the patients suffering from silicosis. Various scholars have stated this phenomenon in their research works in the whole world.

The rate of occurrence of tuberculosis is very high among IPF. This is due to the abnormality of the immunity resulted by diffuse alterations of structure as a result of fibrosis. Other important

reason is usage of the corticosteroids, there is weakness of the immunity system resulting in latent tuberculosis to establish an active state. In this research work, no patients present with IPF found with any roof of suffering from tuberculosis in the past. There was wrong attribution of the symptoms as dry cough, ill health & chronic dyspnea as due to tuberculosis. A highly clinical degree is the requirement for the identification of the interstitial lung disease in initial stages. There was overlooking to the very frequent symptoms as cough & dyspnea and thought to be because of the habits of smoking, elder age or some other infections and most commonly tuberculosis. This is due to the low knowledge of the physicians about the complications of interstitial lung diseases and deficiency of the resources in these particular areas to obtain the diagnostic methods as CT scan & biopsy of lungs for every patient.

This very reason is the cause of useless utilization of the anti-tuberculosis drugs by many patients as well as these patients bear the side effects of these medicines with the delay in the proper treatment of their disease. The postponement in the identification of these diseases of fibrosis, particularly IPF, with less survival of median is significant. This also results to very high rate of mortality which is independent of the severity of the disease.

CONCLUSION:

One of the important clinical complications are interstitial lung diseases which normally unidentified & misdiagnosed. The most common confusion of this complication is similarity with the tuberculosis. There is requirement of the complete awareness about interstitial lung diseases to the professionals working in primary health care centers, particularly in the countries with very high burden of the tuberculosis to restrict the mistreatment with the drugs for anti-Tuberculosis when there is no requirement of these medicines as well as in time referrals of the patients of Interstitial Lung Diseases to concern departments.

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