

Original article:

Study of prevalence of pulmonary tuberculosis in CKD patients

1DR.G.ELANGO, 2DR.C.RAMESH*, 3SIRUVACHUR

¹PROF OF GENERAL MEDICINE, DHANALAKSHMI SRINIVASAN MEDICAL COLLEGE & HOSPITAL SIRUVACHUR, PERAMBALUR, TAMILNADU.

²PROF OF CHEST AND TB , DEPT OF CHEST AND TB, DHANALAKSHMI SRINIVASAN MEDICAL COLLEGE & HOSPITAL, PERAMBALUR, TAMILNADU.

³Department of General Medicine Dhanalakshmi Srinivasan Medical College & Hospital.Siruvachur,Permbalur , Tamilnadu

Corresponding author*

Abstract

The incidence of uremia and chronic kidney disease in the rural population of perambalur district has been well documented. A majority of tb cases develop within the first year of dialysis uremia has profound effects on immune function.

The association of tuberculosis is hence highly probable in ckd and the increased risk of infection varies from two – twenty five folds. R clinical and chest x-ray findings were analyzed in ckd patients presenting to our outpatient dept with fever and difficulty in breathing. The prevalence and association of tb in our population is comparable with that of others reported.

Key words : CKD, Uremia, Tb, Immunity.

Introduction

Our medical college hospital caters largely to the suburban and rural parts of perambalur district of Tamil Nadu. CKD was observed to be rampant in the op population and the prevalence contributing factors were analysed and presented separately. In the period from April 2015 to March 2017, many of these ckd patients presented with fever and respiratory symptoms. These patients were analysed, evaluated and results tabulated to conclude increased association of tuberculosis in patients with ckd.

Such patients put forth a challenging situation of two co-existing immune-suppressive illnesses necessitating treatment modification.

Aims and objective: To study the prevalence of pulmonary tuberculosis in CKD patients presenting to our outpatient in general medicine department.

Materials & methods

The patients presenting to our outpatient department with ckd with fever, cough and difficulty in breathing were evaluated.

Total count, urea, creatinine, Sputum AFB and x-ray findings were done and tabulated. No patient was excluded by age or gender parameters.

Results:

Table 1

April 2015 to March 2017 Total No of Ckd out Patients

CKD out Patients	
April 2015-march-2016	867
April2016-march-2017	1550

Fig1.1 Total no of CKD op patients

Patients with positive x ray finding,

Total no patients N=29,

Male= 27,Female= 2

TABLE 2

Tot No of Chest X-ray Patients

CHEST XRAY	PATIENTS
CAVITY	12
INFILTRATION	14
FIBROSIS	4
C +EFFUSION	2
INFILTRATION+FIBROSIS	2
TOTAL PATIENTS	34

Table 3

Total No of CKD Presenting to Our Op List

Year	No. Of. patients	Month
2015	867	Jan-dec
2016	1550	Jan-dec
2017	510	Jan-march

Table:-4,

Renal parameters

S.NO	UREA	CREATININE
1	62	2.9
2	24	1
3	56	4.4
4	65	2.3
5	50	2.1
6	56	2.7
7	60	3.8
8	69	2.8
9	88	3.4
10	75	3.3
11	42	1.8
12	52	2.8
13	92	2.9
14	115	4.6
15	65	2.2
16	111	5.9
17	72	3.8
18	67	2.7
19	86	3
20	57	3.8
21	76	1.9
22	69	1.9

23	52	2.7
24	59	2.7
25	64	2.2
26	52	1.9
27	85	2.5

Results

Evaluation of patients with biochemically positive renal parameters who had co-existing fever and cough revealed insignificant mantoux, and equivocal blood counts but chest x-ray was more correlative for tuberculosis, Significant amount of pulmonary infiltrates and fibrosis were seen in more than 50%, who were detected to have tuberculosis ref: diagram there was no correlation with the severity of renal failure and tuberculosis and our study did not include dialyzed patients.

Discussion

Patients with advanced kidney disease are susceptible to tuberculosis infection and disease. Immunity is impaired in ckd Patients through reduced function of T and B cells and neutrophils. Ra1 Diagnosis of Latent Tuberculosis Infection release traditionally on a combination of clinical history tuberculin skin test and chest x ray results.ra2

In our patient's population of ckd, positive chest X ray results, Our patient's population of ckd positive chest xray findings confirmed tuberculosis while history and TST were nonspecific. The recently

developed interferer gamma release whole blood assays are a promising diagnostics addition in ckd population and these are under evaluation.ra3

The increased risk of TB in CKD patients have been reported to be due to other Co-existing immune suppression by diabetes, HIV or vitamin D deficiency (B) (1) There has been a clear evidence that ckd mediated impairmentof cell mediated immunity is an important factor. Several studies have shown that vitamin d deficiency predisposes to TB reactivation.RB2

Increased risk of TB in CKD patients,including and concomitant medication it is clear that CKD mediated impairment of cell mediated immunity is an important contributory factors. Several studies have shown that vitamin d deficiency, a common problem in CKD, can predispose to TB reactive.RB2 Peripheral neuropathy fro isonazid was comman despite the prophylactic use of pyridoxine.TB in patients with CKD continue to be challenging and screening for both active and latent Tb is essential

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