MEDICAL CHANNEL

Original Article

CLINICO-RADIOLOGICAL PRESENTATION OF THE PATIENTS WITH POTT'S DISEASE, 3 YEARS EXPERIENCE AT DEPARTMENT OF NEUROLOGY, CHANDKA MEDICAL COLLEGE HOSPITAL (SMBBMU) LARKANA.

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ABSTRACT

Objective: The objective of this study was to acquire the detailed information of clinico-radiological presentation of the patients, who were diagnosed & treated as a case of POTT'S DISEASE.

Methods: This is hospital based retrospective study conducted at department of Neurology Chandka Medical College Larkana from Jan: 2009 to Dec: 2011. The files of patients who were clinically diagnosed as a case of Pott's disease were reviewed and data was collected from the files.

Results: There were 28 patients, who were clinically diagnosed as a case of Pott's disease. Out of these patients, males were in predominance with total No: 21(75%) and females were 07(25%), with the ratio of male to female was 3:1. Mean age of patients was years, most of them belonging to district Larkana, Back pain was presenting complain in 15(53.5%). Paraplegia was presenting complication in 04 (17.8%) patients. Site of spine involved was lower lumbar (L4-S1) region involved in 10(35.7%), followed by upper lumbar (L1-L3) involved in 08 (28.5%), thoracic region in 09(32.1%) patients and cervical region in one patient.

Conclusion: As tuberculosis is very common in Pakistan, in our study we found that the spine is one of the most frequently involved region in CNS Tuberculosis in our areas. All the patients with Pott's disease were treated with drug therapy (ATT) and 13(46.4%) patients under went surgery due to Neurological complications. Most of the patient with Pott's disease began to improve 03 months after treatment and healed completely after 12 months.

Key Words: Pott's disease, back pain, spinal tuberculosis, Paraplegia.

INTRODUCTION

Pott's disease is a presentation of extra pulmonary tuberculosis involving spinal column, caused by tuberculosis bacillus 'mycobacterium tuberculosis'. It accounts for 50% of cases of skeletal TB[1-2] and 15% of cases of extra pulmonary TB[3]. Pott's disease was named after 'Sir Percivall Pott (1714-1788) an English surgeon[4]. The infection spreads through hematogenous route from other sites often pulmonary. Usual sites to be involved are the lower thoracic and upper lumbar vertebrae. It occurs most commonly in children and young adults[5-8]. Various types of vertebral body tuberculosis have been identified like fragmentary, osteolytic, subpreiosteal, sclerotic/ localized[9-11].

Early diagnosis and treatment is mandatory to avoid complications. For early detection of Pott's disease with accuracy magnetic resonance imaging (MRI) and single photon emission computed tomography (SPECT) studies are helpful[12] Despite of advancement in diagnostic procedures, there may occur delay in accurate diagnosis of Pott's disease, specially in

developing countries like Pakistan, which leads to serious neurological complications.

Anti tuberculous agents are the most important part of management of tuberculosis and majority of patients with Pott's disease can be successfully treated with effective medications. Surgery is sometime required for the patients with neurological complications resulting from expanding abscess, spinal cord compression, progressive kyphotic deformity and sequestered bone & disc disease[13].

MATERIAL AND METHODS

This was retrospective study conducted in department of Neurology, Chandka Medical College Larkana, Shaheed Mohatarma Benazir Bhutto Medical University from Jan: 2009 to Dec: 2011. Case sheets of the patients who were clinically diagnosed as case of Pott's disease were reviewed and demographic data was recorded for age, sex, area, patient's presentation, site of spine involved primary focus and patient's Comorbids. The diagnosis of Pott's disease was made according to presentation compatible with characteristic histology or micro biologic evidence of Pott's disease. Inclusion criteria were clinical evidence of chronic infection with involvement of spine, exclusion criteria were patients presenting with acute infection. X-ray spine, chest, CT scan spine and other basic investigations were done in all the patients, while MRI spine and other specific investigations were done wherever necessary.

RESULTS

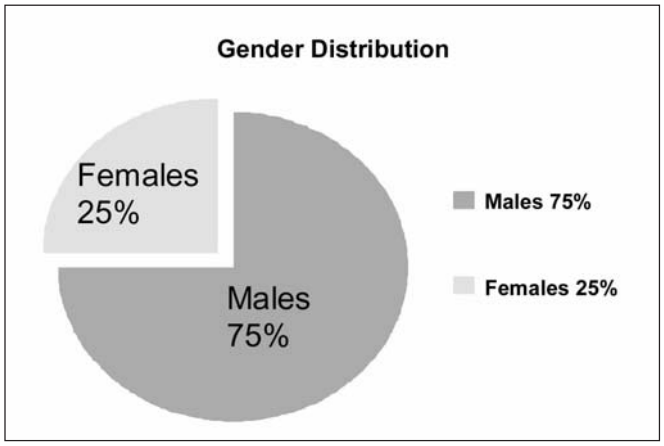
There were 28 patients with Pott's disease treated of Nurology department at during last 3 years (Jan: 2009 & Dec: 2011). Out of these 21(75%) were males and 07(25%) were females. Male to female ratio being 3:1

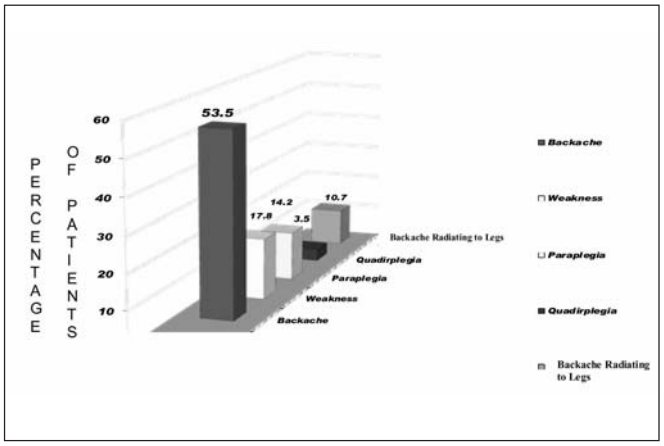
Mean age of the patients was 39 years. Majority 08(28.5%) of patients who were diagnosed as a case of Pott's disease were in 5th decade (41-50years). 05(17.8%) were in 3rd and 4th decade of age. 04(14.2%) patients were in 2nd and 6th decade.

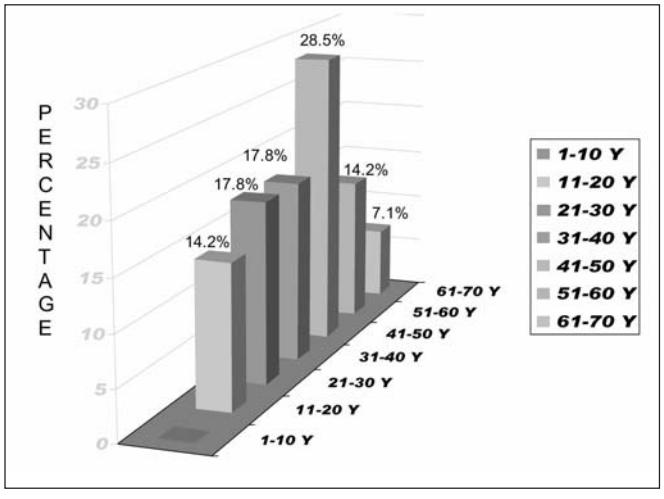
Majority of patients belong to district Larkana while rest of patients belongs to various areas of upper Sindh.

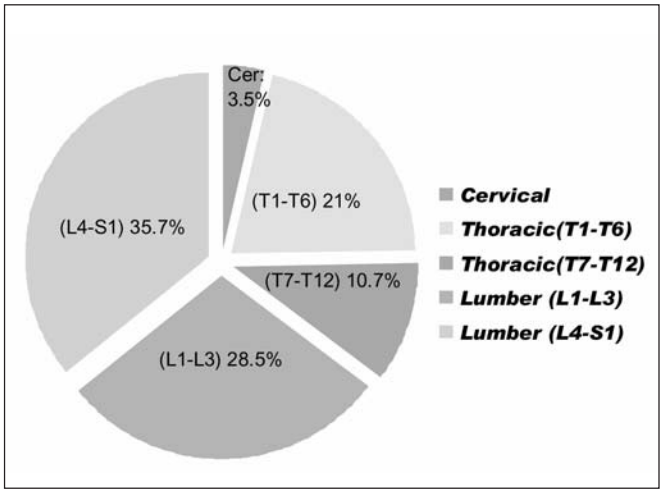
Among the 28 patients studied the most common presentation was back pain in 15(53.5%), weakness in 05(17.8%), back pain radiating to legs in 03(10.7%) and weight loss was seen in most of cases. 04(14.2%) presented with paraplegia and 01 (%?) patient was having a quadriplegia at time of presentation. 04(14.2%) were having the complain of sphincter problem.

The lower lumbar (L4-S1) was most common site of involvement in 10(35.7%) patients, followed by upper lumbar (L1-L3) in 08(28.5%), upper thoracic in 06(21.4%), lower thoracic in 03(10.7%) and cervical in 01(3.5%). Spinal cord compressions on MRI were









detected in 13(46.4%).

Out of 28 patients, primary focus of TB was found in lungs in only 04(14.2%) patients.

Related comorbids among these patients were viral hepatitis markers were positive in 06(21.4%) patients, diabetes mellitus in 03(10.7%). 01 patient developed drug induced hepatitis and 01 (%?) developed drug induced optic neuropathy.

All the patients with Pott's disease were treated with drug therapy (ATT) while 13(46.4%) under gone surgery due to neurological complications. Most of them began to improve after 3 months of treatment and healed completely after 12 months in Majority of patients.

DISCUSSION

Pott's disease (Spinal tuberculosis) is a common health problem in our area. Anti-tuberculous therapy is the main step of its management with some patients requiring surgical intervention.

In our study, majority 15(53.5%) has complain of back pain while weakness in 05(17.8%). Many other studies are in agreement with our present study but with more number as compared to our study. In Mohammadreza's study majority 84% were presenting with back pain & 10% with weakness (13). In Polly's study 53% were having complained of back pain (14). In a study conducted in Taiwan, back pain was most common (100%) presenting symptom followed by weakness (53%) [15].

From age point of view, the mean age of patient suffering from spinal tuberculosis is reported to be 40 to 45 years in various studies [13-18] which is almost similar to result of our study.

Pott's disease most commonly involves upper lumbar and lower thoracic region. In our study lower lumbar was involved in 10(35.7%), upper lumbar in 08(28.5%) followed by upper thoracic in 06(21.4%), lower thoracic in 03(10.7%) and cervical in 01 patient. In comparison to this a study conducted in Taiwan, the lumbar spine was most commonly (39%) involved followed by thoracic spine 37 %[15]. In Nussbaum's study 60% to 90% of cases were involving the lower thoracic and upper lumbar region [8].

The incidence of TB has shown sharp rise in co-incidence with HIV infection, but in our study incidence of TB was not related to incidence of HIV AIDS. Concomitant pulmonary TB was found in 04(14.2%) compared to 32% in another study [15].

CONCLUSION

As Pott's disease (Spinal TB) is still an important public health problem in Pakistan, it must be suspected in presence of back pain or when radiological findings are suspicious of spinal tumor, or when patient is presenting with paraplegia. Successful management is based on early and accurate diagnosis through the modern imaging methods. The treatment of Pott's disease is curative if diagnosed and treated at early stage.

In our study all the patients were treated with drugs and some were surgically operated due to complication, most of them improved with complete course of treatment.

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