The spinal column is involved in less than 1% of all cases of tuberculosis (TB). Spinal TB is a very dangerous form which is spondylitis without disc involvement [6]. Spinal TB can include any of the forms date back to 5,000-year-old Egyptian mummies, the first modern case of spinal TB was described in 1779 by Percival Pott [1]. Spinal involvement occurs in less than 1% of patients with TB [2,3] but the increasing frequency of TB in both developed and developing countries has continued to make spinal TB a health problem [2,4]. Spinal TB (Pott’s disease) is the most common as well as one of the most dangerous forms of skeletal TB and accounts for 50% of all cases of skeletal TB. Although the thoracolumbar junction seems to be the most common site of the spinal column involvement in spinal TB, any part of the spine can be affected [5]. Furthermore, the incidence of neurologic complications in spinal TB varies from 10% to 43% [1].

The objective of this study is to know the functional outcome of tuberculosis of spine treated with laminectomy posterior decompression and pedicle screw fixation.

Materials and Methods
This study was conducted at Mahatma Gandhi Medical college, Jaipur. 30 patients were included in this study suffering from tuberculosis of spine from May 2014 to May 2016

Inclusion Criteria:
1. Patient not responding to medical therapy
2. Patient with progressive neurological deficiency on medical treatment
3. Patient with neurological deficiency

Exclusion Criteria:
1. Patient diagnose with pott’s spine without neurological deficiency

Pathophysiology
There are two distinct types of spinal TB, the classic form or spondylodiscitis, and an increasingly common atypical form which is spondylitis without disc involvement [6]. In adults, the involvement of the intervertebral disc is secondary to spread from adjacent infected vertebra whereas in children it can be primarily due to the vascularized nature of the intervertebral disc. The basic lesion in Pott’s disease is a combination of osteomyelitis and arthritis, usually affecting more than one vertebra. The anterior aspect of the vertebral body adjacent to the subchondral plate is commonly involved [7]. Spinal TB can include any of the following: progressive bone destruction leading to vertebral collapse and kyphosis, cold abscess formation (due to extension of infection into adjacent ligaments and soft tissues), spinal canal narrowing by abscesses, granulation tissue or direct dural invasion resulting in spinal cord compression and neurologic deficits [7].

Diagnosis
A history of tuberculosis, a positive skin test (its value declines in endemic areas), and an elevated erythrocyte sedimentation rate (ESR) may be useful in the diagnosis of spinal TB [8,9]. Biopsy plays a valuable role in the diagnosis of spinal TB infection. The use of DNA amplification techniques (polymerase chain reaction or PCR) may facilitate rapid and accurate diagnosis of the disease [10].

Computed tomography (CT) provides bony detail, while MRI evaluates the involvement of soft tissue and abscess formation.

Fig. 1

(A) Lateral radiography shows severe kyphosis resulting from significant destruction of two contiguous vertebral segments by tuberculosis infection in the thoracolumbar junction (Modified from Rahimi-Movaghar [15]. (B) Schematic representation of the pathology, affecting the intervertebral disc, vertebral bodies, and anterior paravertebral region (orange). The posterior elements are also involved. As a result of such a significant deformity, noticeable compression endangers spinal cord (yellow).
Indications of Surgical Intervention

Indications of surgical intervention are shown in Table 1. Table 2 shows the management of epidural abscesses.

Table 1

<table>
<thead>
<tr>
<th>Indications of surgery</th>
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<tbody>
<tr>
<td>Numbness and tingling</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Temperature change</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Urinary frequency</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Bladder urge</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
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Table 2

<table>
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<tr>
<th>Indications</th>
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<tr>
<td>Postoperative x-ray</td>
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<td></td>
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<tr>
<td>Surgical vs. medical therapy for epidural abscess</td>
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</tbody>
</table>

Surgical Techniques

The following techniques are currently used for the treatment of TB spondylitis: 1) posterior decompression and fusion with bone autografts, 2) anterior debridement/decompression and fusion with bone autografts, 3) anterior debridement/decompression and fusion, followed by simultaneous or sequential posterior fusion with instrumentation, and 4) posterior fusion with instrumentation, followed by simultaneous or sequential anterior debridement/decompression and fusion [16]. In our study the spine was exposed from the posterior aspect in all 30 cases. It was then stabilized with four pedicle screws. Hemilaminectomy was done and was gradually removed with rongeurs and nibblers. The cord was decompressed posteriorly. Posterolateral fusion with bone graft was undertaken and the surgical wound was closed in layers. Figure 3. MRI scan of the affected spine. Figure 4. MRI scan of the affected spine. Post-operatively the patient was continued with chemotherapy of the affected spine. Figure 4. MRI scan of the affected spine. Post-operatively the patient was continued with chemotherapy of the affected spine.

CONCLUSION

Posterior transpedicular limited anterior decompression is a viable option in Pott’s paraplegia. However, anterior column reconstruction is important in preventing kyphosis progression. Pseudoarthrosis may be present in infective spinal conditions also.

REFERENCES:


