RESULTS

Twenty patients with suspected spinal infections were included in this study.MRI of the spine was done for all the patients

Complementary biopsy study had done in eighteen patients. Biopsy results showed 11 cases to be tuberculous spondylitis, and 7 cases to be pyogenic spondylitis . the other case diagnosed clinically and laboratory as brucellar spondylitis .

The last case shows typical MR features of transverse myelitis.

Patients with T.B. spondylitis (11 patients) show the following :

- 6 cases in the lumber region, 5 cases in the dorsal region, and 3 cases in the cervical region.
- Bone marrow changes seen as heterogeneous signal of low & high signal intensity on T1-& T2- WI respectively were seen on 11 cases.
- Disc affection:
  - Reduced disc height in 5 cases.
  - The discs show abnormal signal in 6 cases.
- Epidural abscess was seen in 9 cases.
- Paravertebral & prevertebral extension was seen in 8 cases.
- Multilevel affection was seen in 3 cases, one case of cervical & dorsal levels, 2 cases of dorsal & lumber levels affection.

Patients with pyogenic spondylitis (7 cases) showing the following:

- 5 cases on the lumber region & only 2 cases in the dorsal region.
- Bone marrow changes were seen as low signal intensity in the marrow of 2 or more adjacent vertebral bodies on T1-WI & high signal intensity on T2-WI in 5 cases.

- Disc affection:
  - abnormal disc signal were seen in 5 cases.
  - Reduced height in 3 cases.
- Epidural abscess was seen as isointense signal relative to adjacent disc in T1- WI and of high signal intensity in T2- WI in 4 cases.
- Parvertebral and prevertebral extension were seen in 4 cases.
- No subligamentous extension or multilevel affection was detected in pyogenic spondylitis.

Patient with Brucellar spondylitis (1 case) showing the following:

- The lesion affects the dorsal spine (D8/9).
- Vertebral body affection: diffuse vertebral body affection was noted in the form of low signal intensity in T1-WI and high signal intensity with homogenous contast enhancement and intact vertebral bodies.
- Disc affection: shows abnormal signal in the form of low signal intensity on both T1-and T2-WI, with hetrogenous contrast enhancement.

Patient with transverse myelitis (1 case) showing the following:

-Long segment of the dorsal spinal cord and conus meduularis showing mild fusiform swelling, faint hyperintense signal on T1-WI and intense high signal on T2-WI characteristically affecting the anterior portion of the spinal cord.

Table (2): MR features of tuberculous spondylitis

	Number of cases	%
Site: -Cervical -Dorsal -Lumber	 3 5 6	 27.2 % 45.4 % 54.5 %
Multilevel affection:	3	27.2 %
Bone marrow changes: -Low T1-WI signal -High T2-WI signal	 10 10	 90.9 % 90.9 %
Disc affection: -Reduced hieght -Abnormal signal	 5 6	 45.4 % 54.5 %
Epidural abscess:	9	81.8 %
Paravertebral and prevertebral extension:	8	72.7 %

Table (3): MR features of pyogenic spondylitis

	Number of cases	%
Site:		
-Cervical	0	
-Dorsal	2	28.5 %
-Lumber	5	71.4 %
Bone marrow changes:		
-Low T1-WI signal	7	100 %
-High T2-WI signal	7	100 %
Disc affection:		
-Reduced hieght	6	85.7 %
-Abnormal signal	7	100 %
Epidural abscess:	4	57.1%
Paravertebral and prevertebral extension:	4	57.1 %

Table (4): Comparison between MR features of tuberculous spondylitis and pyogenic spondylitis:

	Tuberculous spondylitis	Pyogenic sponylits
Site: -Cervical -Dorsal -Lumber	27.2 % 45.4 % 54.5 %	0 % 28.5 % 71.4 %
Multilevel affection:	27.2 %	0 %
Bone marrow changes: -Low T1-WI signal -High T2-WI signal	90.9 % 90.9 %	100 % 100 %
Disc affection: -Reduced hieght -Abnormal signal	45.4 % 54.5 %	85.7 % 100 %
Epidural abscess:	81.8 %	57.1%
Paravertebral and prevertebral extension:	72.7 %	57.1%