

The Ongoing challenge when dealing with Tuberculosis and Brucellosis spondylodiscitis

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Introduction

- Spondylodiscitis (SPD) is a rare infection of the intervertebral disc but may lead to devastating complications. Owing to non-specific symptoms of tuberculosis and brucellar SPD, the diagnosis is often delayed.
- We aim to compare clinical and laboratory findings as well as radiological features of tuberculosis and brucellosis SPD.

Methods

- We carried out a retrospective study which included 102 patients with definite SPD between 1990 and 2013. Among this population, tuberculous spondylodiscitis (TS) was revealed in 66 patients (64.7%) while 36 patients (35.3%) had brucellar spondylodiscitis (BS).

Results

- We have included 102 patients (Table 1).
- The mean age was 48.5 years ± 18 years.
- There were no significant differences in age between the groups (p= 0.7).

Table 1: Gender distribution

	Male	Female	P-Value
TS (n=66)	30	36	0.004
BS (n=36)	27	9	

- The mean duration of symptoms before diagnosis was 7.3 and 8 weeks for BS and TS respectively.

- The most frequent clinical symptom was **backache** (93%), followed by such constitutional symptoms as **nocturnal sweating** (56.8%) .
- The clinical manifestations were summarized in Table 2.

Table 2: Clinical manifestations

Signs and symptoms	TS n (%)	BS n (%)	P-value
Back pain	60 (91)	35 (97.2)	0.2
Fever 38°C	36 (35.3)	10 (9.8)	0.009
Weakness	33 (50)	24 (66)	0.1
Nocturnal sweating	32 (48)	25 (69.4)	0.02
Lack of appetit	31(47)	19 (52.7)	0.5
Neurological deficit	21 (31.8)	16 (44.4)	0.7

- Laboratory findings** are shown in table 2.

Table 2: Laboratory findings

Laboratory findings	TS (mean ± SD)	BS (mean ±SD)	P-value
Leucocytes (cell/mm ³)	8200±3474	6140±3073	0.001
ESR (mm/h)	97±72	50±34	0.04
CRP	57.3±51	40±38	0.1

- The diagnosis was based on **serological examinations** and **blood cultures** in all BS patients and eight of them underwent bone biopsy (22%).

- Bone biopsy** have been used to determine the causative agent in 44 of the TS patients (66.6%).

- Table 3 shows the Distribution of radiological features by types of spondylodiscitis (SPD).

Table3: Distribution of radiological features by types of SPD

Radiological features		TS	BS	P-value
Vertebral level affected	Cervical	7 (87.5)	1 (12.5)	0.2
	Dorsal	33 (50)	9 (25)	0.009
	Lumbar	28 (42.4)	28 (77.7)	0.001
Psoas abscess		11 (16.6)	8 (22.2)	0.2
Epidural abscess		26 (74.2)	10 (28.5)	0.48

- The **mean duration of treatment** was 14 and 8 months for TS and BS respectively. There were significant differences between the two groups (p=0.001).
- Eight patient (12.6%) with TS underwent **surgery**.
- Favorable outcome** with healing occurred in 31 and 22 cases of TS and BS respectively (Table 4).

Table 4: Evolution's modalities

Evolution	TS	BS	P-value
Sequelae	71.4%	50%	0.06
Favorable	80.7%	82.4%	0.8

Conclusion

- SPD remains a challenging disease which exhibits substantial diagnostic and therapeutic difficulties. There are significant clinical, biological and radiological differences between TS and BS. The above mentioned differences may help to etiological diagnosis while awaiting for microbiological confirmation.