International Journal of Research in Orthopaedics
Dharmshaktu GS et al. Int J Res Orthop. 2015 Dec;1(1):28-30
http://www.ijoro.org

DOI: http://dx.doi.org/10.18203/issn.2455-4510.IntJResOrthop20160345

Case Report

Isolated sacrum tuberculosis with presacral and paraspinal abscess: case report of a common disease at uncommon site

Ganesh S. Dharmshaktu*, Aanshu Singhal, Pankaj Singh

Department of Orthopaedics, Government Medical College, Haldwani, Uttarakhand, India

Received: 13 October 2015
Accepted: 21 November 2015

***Correspondence:**
Dr. Ganesh S. Dharmshaktu,
E-mail: drganeshortho@gmail.com

ABSTRACT

Refractory backache in the elderly calls for further evaluation to rule out any sinister underlying disorder. Radiological features with extensive destruction of bony tissue may raise suspicion of malignant process and a careful assessment with the help of advance imaging modalities along with isolation of an infective agent is necessary to establish a diagnosis of infective pathology as the cause. We, hereby, report a case of recalcitrant low back pain in the elderly that was evaluated and resulted in the final diagnosis of tuberculosis of sacrum and resultant abscess collection in the presacral and paraspinal region. Early identification of infective organism by culture resulted in early and appropriate treatment and subsequent excellent recovery.

Keywords: Tuberculosis, Spine, Sacrum, Treatment, Imaging, MRI, CT, Diagnosis, Mycobacterium

INTRODUCTION

Almost half of all cases related to skeletal tuberculosis involve spine.[1] Spine is involved in about 1-5% of all cases of tuberculosis.[2] Sacrum is a rare site of involvement, more so in isolation. Isolated sacrum Pott's disease is limited to few reports or small series.[3-5] The common presentation of low backache in the absence of features like sinus, abscess or constitutional features masks the disease for a late or neglected state. A high degree of clinical suspicion followed by judicious use and assessment of investigations remains key to early and appropriate treatment. As there is growing resurgence of tuberculosis in the settings of immune-compromised state or bacterial resistance, early diagnosis and effective therapy remains mainstay to treat and limit its global burden and morbidity.[6]

CASE REPORT

A 63 year old otherwise healthy female patient presented to us with complaints of chronic low back pain for last nine months. The pain was insidious and dull aching and located at lower lumbar region and radiating to left thigh. The pain was mild in the beginning but increasing in severity and duration with time. The pain was initially relieved by oral pain medications but by the last four months the dosage of the medication has been increased with reference to a transient pain relief. The patient had no history of chronic co-morbidity, substance abuse or other treatment related or remote to present complaints except a laparoscopic cholecystectomy done 2 years back. For the past three months there has been history of on and off fever that was relieved on taking medication. On examination, vitals were within normal limits and only outstanding finding was bilateral extensor plantar reflexes. Other system examinations were unremarkable. The radiograph of the lumbo-sacral spine showed no contributing information and magnetic resonance

imaging (MRI) was advised (Figure 1). MRI showed cortical irregularity and bony erosion in left sacral ala along with adjacent marrow edema which was also seen in left iliac bone. There was also an abscess formation that was seeping into pre-sacral space and spinal canal medially on left side. Small ring enhancing lesions were also noted in bilateral iliac bone. Above findings were suggestive of acute infective pathology with tuberculosis as first differential (Figure 2), later advised non-contrast computerized tomogram (CT) scan revealed destruction of S1 vertebral body and sacral ala with altered marrow density in S1 and S2 vertebrae. Prevertebral collection with few foci of calcifications was noted on left side along with a posterior paravertebral collection on left side (Figure 3). Ultrasound guided aspiration of paravertebral abscess was planned and performed after informed consent and under aseptic condition. The aspirated fluid was sent for culture and sensitivity and also for Gram stain and Acid Fast Bacillus (AFB) identification. AFB culture was positive after 14 days of incubation for Mycobacterium spp. She was managed by four drug oral anti-tubercular therapy in dosage according to body weight and changed to three and two drug regimen after four and nine months respectively. Nutritious diet and gentle body exercises supplemented the regimen. The patient responded to the therapy in the follow up with remarkable improvement in clinical and pain profile which continued throughout the therapy period of eighteen months. There was no remarkable complications or fresh complaints related to disease or drug in the follow up. At final follow up at eighteen months, patient was pain and disability free with active involvement in activities of daily living.

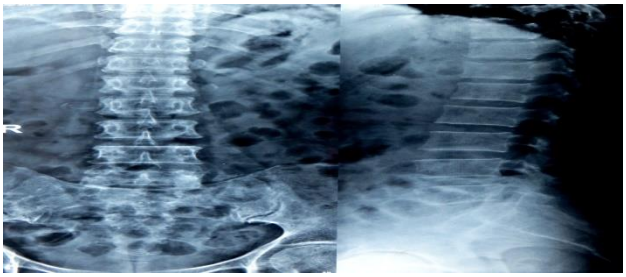

Figure 1: Radiograph of the lumbo-sacral region showing minimal information about sacral pathology.

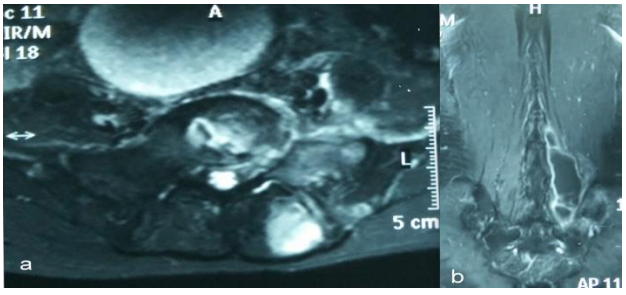

Figure 2: MRI of the scrum showing sacral destruction with presacral (a) and paraspinal abscess (b).

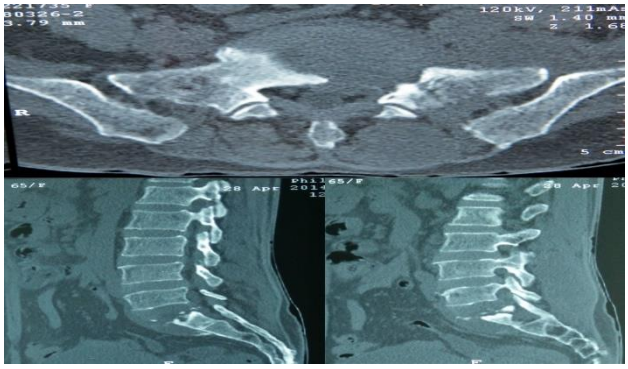

Figure 3: CT scan depicting the extent of destruction of sacrum.

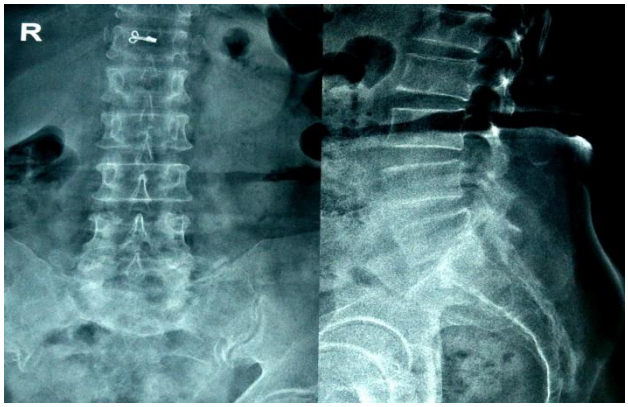

Figure 4: Final radiograph at last follow up showing healed disease.

DISCUSSION

Isolated sacral tuberculosis is a rare event with reported incidence of 5% of spine cases. Hematogenous seeding from lung or genitourinary primary focus has been postulated to be a major cause and involvement of Batson's venous plexus and that of lymphatic channels of adjacent structures are other routes of secondary spine affectation. The sacrum is exceptionally involved site and requires a diagnostic challenge in the settings of vague and unsuspecting clinical profile. The refractory nature of symptoms should raise the suspicion of tuberculosis in the endemic regions like ours to rule out as first differential diagnosis. At times the MRI or CT pictures also mimic those of a malignant process posing a diagnostic roadblock.[8,9] The MRI and CT with extensive destruction in advanced age group mimic a picture of malignancy and tissue diagnosis or the isolation of infective organism is necessary to end the diagnostic dilemma. The exclusion of mimics in healthy patients becomes more difficult and requires diagnostic workup.[10] We had success in obtaining a positive finding in the isolation of mycobacterium in the diseased tissue and start anti-tubercular treatment to a rapid recovery. The monoparesis cases have been reported previously but our case presented with grade 1 paraplegia as no appreciable clinical feature of paraplegia was present except bilateral

plantar extensor response.[11] Our case highlights the importance of high degree of suspicion and cautious assessment of imaging reports to reach the diagnosis.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Tuli SM. General principles of osteoarticular tuberculosis. Clin Orthop Relat Res. 2002;398:11-9.
2. Fuentes Ferrer M, Gutie´rrez Torres L, Ayala Ramı´rez O, Rumayor Zarzuelo M, del Prado Gonza´ lez N. Tuberculosis of the spine. A systematic review of case series. Int Orthop. 2012;36:221-31.
3. Shantanu K, Sharma V, Kumar S, Jain S. Tuberculosis of sacrum mimicking as malignancy. BMJ Case Rep. 2012;27. doi: 10.1136/bcr.07.2011.4505.
4. Patankar T, Krishnan A, Patkar D, Kale H, Prasad S, Shah J, et al. Imaging in isolated sacral tuberculosis: a review of 15 cases. Skeletal Radiol. 2000;29:392-6.
5. Punia VPS, Kumar S. Atypical manifestation of sacral tuberculosis as Caudaconus syndrome. JIACM. 2008;9:57-60.
6. Cavalcante RAC, Giacomini L, Joaquim AF, Yoshinari H, Dal Fabbro M, Tedeschi H. Sacral tuberculosis in the elderly: an unusual cause of refractory low back pain. J Bras Neurocirurg. 2013;24(4):335-9.
7. Pertuiset E, Beaudreuil J, Liote F, Horusitzky A, Kemiche F, Richette P, et al. Spinal tuberculosis in adults: A study of 103 cases in a developed country, 1980- 1994. Medicine. 1999;78:309-20.
8. Wellons JC, Woods CW, Eastwood JD, Woods CW, Lawson WT, Eastwood JD. Sacral tuberculosis: a case report and review of the literature. Surg Neurol. 2004;61:136-41.
9. Burrill J, Williams C, Bain G, Conder G, Hine AL, Misra RR. Tuberculosis: a radiologic review. Radiographics. 2007;27:1255-73.
10. Coffman GJ. Presentation of a rare sacral tuberculosis in an otherwise healthy patient: diagnostic challenge and review of treatment. J La State Med Soc. 2012;164:67-9.
11. Sament R, Bachhal V, Gopinathan NR, Sen RK. Isolated tuberculosis of sacrum with monoparesis: an atypical presentation. Asian Spine J. 2013;7:351-4.

Cite this article as: Dharmshaktu GS, Singhal A, Singh P. Isolated sacrum tuberculosis with presacral and paraspinal abscess: case report of a common disease at uncommon site. Int J Res Orthop 2015;1:28-30.