

Images in Clinical Tropical Medicine

Low Back Pain and Foot Drop Associated with Dog Tapeworm Infection

Ayush Agarwal,¹ Venugopalan Y. Vishnu,^{1*} and Ajay Garg²

¹Department of Neurology, AIIMS, New Delhi, India; ²Department of Neuroradiology, AIIMS, New Delhi, India

A 61-year-old woman presented with low back pain associated with radiation to left lower limb since the past 1 year, with left foot drop since the past 1 month. Examination revealed wasting of the left lower limb with a foot drop. The remaining neurological examination was normal. Magnetic resonance imaging of the spine revealed diffusely bulky and multi-septated homogenous fluid-filled lesions (with signal intensity similar to cerebrospinal fluid [CSF]) in the intraspinal compartment from L3 to sacral vertebrae, causing extradural compression, and prevertebral and paravertebral locations (Figure 1). Contrast-enhanced computed tomography of the abdomen revealed similar cysts in the retroperitoneum, liver, and left psoas muscle. Serum ELISA was positive for *Echinococcus* IgG antibody (value-19.31; normal < 9), thus confirming the diagnosis of disseminated hydatidosis.

Hydatid disease is a parasitic infection caused by the larval form of *Echinococcus granulosus*.¹ Humans are intermediate hosts who become infected by accidental consumption of infected food/water,² with liver and lungs being the commonest sites of involvement.³ Bone involvement is rare, occurring in less than 2% cases, with spinal involvement occurring in half of those cases.³ The thoracolumbar spine is the common site of involvement, with involvement of the sacral spine being very rare.⁴ ELISA serology has a sensitivity of 80–100% for hepatic infections but only 25–56% for other organ involvement.⁵

In patients hailing from endemic regions and presenting with chronic low backache, with imaging suggestive of space-occupying lesions, hydatid disease should be considered in

differential diagnosis. Early diagnosis and treatment lead to good clinical outcomes.

Received August 13, 2020. Accepted for publication September 16, 2020.

Authors' addresses: Ayush Agarwal and Venugopalan Y. Vishnu, Department of Neurology, AIIMS, New Delhi, India, E-mails: ayushthetaurian@gmail.com and vishnuvy16@yahoo.com. Ajay Garg, Department of Neuroradiology, AIIMS, New Delhi, India, E-mail: drajaygarg@gmail.com.

This is an open-access article distributed under the terms of the Creative Commons Attribution (CC-BY) License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

REFERENCES

1. Papanikolaou A, 2008. Osseous hydatid disease. *Trans R Soc Trop Med Hyg* 102: 233–238.
2. Khiari A, Fabre JM, Mzali R, Domergue J, Beyrouti MI, 1995. Unusual locations of hydatid cysts. *Ann Gastroenterol Hepatol (Paris)* 31: 295–305.
3. Agarwal S, Shah A, Kadhi SK, Rooney RJ, 1992. Hydatid bone disease of the pelvis. A report of two cases and review of the literature. *Clin Orthop Relat Res* 280: 251–255.
4. Segura-Trepicho M, Montoya-Nunez JM, Candela-Zaplana D, Herrero-Santacruz J, Pla-Mingorance F, 2016. Primary sacral hydatid cyst mimicking a neurogenic tumor in chronic low back pain: case report and review of literature. *J Neurosci Rural Pract* 7: S112–S116.
5. Karadereler S, Orakdögen M, Kiliç K, Ozdoğan C, 2002. Primary spinal extradural hydatid cyst in a child: case report and review of the literature. *Eur Spine J* 11: 500–503.



FIGURE 1. Sagittal T1-WI (A), sagittal (B and C) and coronal T2-WIs (D) show multiple well-defined cystic lesion in the intraspinal, prevertebral, and presacral spaces (arrows in B and C) and in neural foramina (arrowheads in C). Like the CSF, the lesions are hypointense on T1-WI (A) and hyperintense on T2-WI (B and C). Axial T2-WIs at L5 (E) and S1 levels (F) show intraspinal lesions (arrowheads in E) and lesions involving the left psoas muscle (arrows in E and F).

* Address correspondence to Venugopalan Y. Vishnu, Department of Neurology, Cardioneurosciences Centre, AIIMS, Room no. 704, New Delhi-110029. E-mail: vishnuvy16@yahoo.com