Case Report: Spinal Exostosis in a Girl with Hereditary Multiple Exostoses

[1]Anas, Yahya; [2]Wong FC
[1] Department of Orthopaedics, Hospital Sultan Abdul Halim, Sg. Petani,

INTRODUCTION:

The most prevalent bone tumor, osteochondroma accounts for 20%–50% of benign bone tumors and 10%–15% of all bone tumors[1, 2]. Both the solitary and multiple forms of osteochondroma share a similar radiological appearance; the latter is an autosomal dominant condition known as hereditary multiple exostoses (HME)[1]. In patient with HME, the incidence of spinal exostosis is 3-9%. Lesions are mostly originated from posterior vertebral elements[1,2].

REPORT:

A fourteen-year-old girl with HME and a strong family history presented with pain over thoracic region, and difficulty to ambulate. On physical examination, she had tenderness over thoracic region. Upper limb examination showed normal motor power and sensation, and all reflexes were present and symmetrical. Hoffman's sign and clonus tests were negative. Examination of the lower limb revealed weakness motor power, hyperreflexia and impaired sensation bilaterally.

An urgent whole spine magnetic resonance imaging (MRI) and complementary plain computerized tomographic (CT) thoracic spine showed multiple bony exostosis with right T7 inferior pedicle bony exostosis involving the right facet joint with large intraspinal component causing severe spinal canal stenosis, severe cord compression, focal affected cord edema and right T7 exiting nerve impingement.

The patient underwent surgery for decompression and posterior instrumentation. There were no complications and no adverse events after the surgery. At four-month postoperative follow up, the pain symptoms and weakness had improved significantly.

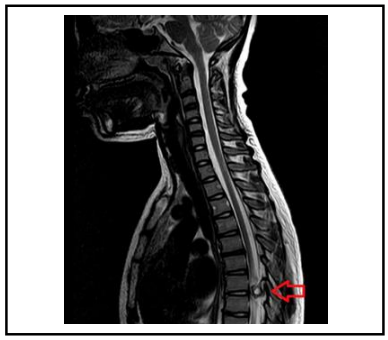

Figure 1: MRI spine: posterior exostosis (red arrow) causing severe spinal cord compression at T7.

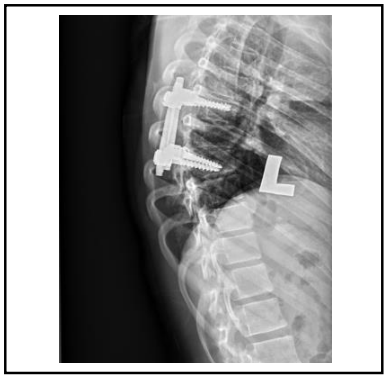

Figure 2: X-ray post decompression and posterior instrumentation.

CONCLUSION:

HME have a wide spectrum of clinical manifestations. The main clinical manifestation in spinal exostosis is pain. Spinal cord compression, however, is a very rare entity in HME.

REFERENCES:

1. Al Kaissi A, et al. Spinal exostosis in a boy with multiple hereditary exostoses. Case Rep Orthop. 2013;2013:758168.
2. Gigi R, et al. Late presentation of spinal cord compression in hereditary multiple exostosis: case reports and review of the literature. J Child Orthop 2019;13:463-470.