A unique case of synchronous extramedullary spinal masses- Is surgery an answer?

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Multiple spinal tumors are known to occur in association with phacomatosis like neurofibromatosis. Rarely, sporadic occurrences have been described in the absence of a clear underlying pathogenesis. Primary spinal cord tumors are anatomically classified into extradural (55%) and intradural (45%) lesions. Intradural lesions are classified as extramedullary (IDEM- meningiomas, neurofibroma or schwannoma) and intramedullary (IDIM-ependymomas). Ependymomas, which are the most common intramedullary (IM) spinal tumors in adults, can also occur in the extramedullary intradural space and impose a diagnostic challenge. Only a few such cases have been described in the literature since the early 1950’s. We report a rare sporadic occurrence of one such IDEM ependymoma synchronously presenting with a different neoplasm, a schwannoma.

A 43-year-old woman presented to the authors’ institution with lumbosacral pain and neurological deficits lasting a decade. On magnetic resonance imaging, she was found to have two stable, contrast-enhancing IDEM spinal lesions in the L2-3 and L4-5 vertebral areas. She subsequently underwent L2-L5 laminectomy with total resection of the former lesion and subtotal resection of the later lesion. Histological and immunohistochemical analysis revealed two distinct tumors: a cellular ependymoma and a schwannoma at the two respective locations.

Ependymomas are slow growing tumors that mimic other benign tumors clinically (radicular/back pain over months to years) as well as radiologically (hyper-intense T2W and contrast enhancing iso-intense T1W images). Hence they are often diagnosed as other benign tumors (meningioma/ schwannoma). Unfortunately, they have a potential for recurrence and metastasis and are primarily treated by resection.

The above case is unique for two reasons; one due to location of ependymoma (IDEM instead of IDIM) and synchronous association with another spinal tumor (schwannoma). Simultaneous presentation of these tumors in the same location (IDEM) is radiologically indistinguishable. However, differentiation is paramount as management differs. Owing to the potential for malignant transformation and tumor dissemination for ependymomas, timely surgical resection followed by surveillance might be a recommended strategy.

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