Case Report

Intradural Spinal Lipoma of the Conus: A Case Report

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Abstract:

Intradural spinal lipomas are rare, and their origin is unknown. Although the clinical presentation may not be distinctive, patients usually present with neurological deficits secondary to mass effect. Total excision may not be possible all time, although subtotal resection is easily done by microsurgery. We report a case of intradural spinal lipoma of the conus medullaries. Total excision was done under microscope and histopathology proved lipoma.

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Introduction:

Intradural lipomas are a subset of spinal lipomas. They are typically intradural, subpial, juxta medullary lesionsal though they have occasionally been reported as entirely intramedullary lesions[1,2]. Intradural lipomas may occur anywhere in the spinal canal. In adults they are most commonly found in the thoracic region, whereas in children the cervical spine appears to be the most common site[3]. They usually occur along the dorsal midline of the spinal cord. The spinal cord is flattened ventrally.Mature fatty tissue within the spinal dura can be seen in a number of entities: lipomyelomeningocele (84%), lipoma of the filum terminale (12%) and intradural lipoma (4%)[4].Intradural spinal lipomas typically present around the second and third decades of life. Males and females are equally affected. Vertebral and dermal abnormalities are not a feature of these lesions as they are with the more commonly seen lipomas associated with forms of dysraphism. Patients present with neurological deficits secondary to mass effect. The most frequently reported clinical presentation is numbness or spastic weakness in the extremities. Back pain may occur. Radicular pain is uncommon[5].Intradural spinal lipomas consist of normal fat. Although the pathophysiology of these lesions is poorly understood they are not considered neoplastic[3].

Case report:

A 18-year-old male patient was presented to us with history of gradual weakness of both lower limbs for 1.5 year. He also complained low back pain for the same duration. But there was no autonomic involvement. On plain X-ray of the lumbosacral spine there was no abnormality. But MRI of the lumbosacral spine showed an elongated hyperintensity at L-1 and L-2 vertebral level in both T-1 and T-2 images (Figure 1). On contrast there was no enhancement of the lesion. On fat-suppressed sequences there was hypointensity. So, our clinical and radiological diagnoses was intradural spinal lipoma of the conus. After all investigation we underwent surgery trough posterior approach. Laminectomy done and after durotomy we got the yellowish lipoma. Total surgical resection of the lesion was done under microscope (Figure 2). Haemostasis done and wound was closed in layers. Post–operative period was uneventful. The neurological status was improved in times without any deficit. The histopathological result proved lioma (Fig.-3).

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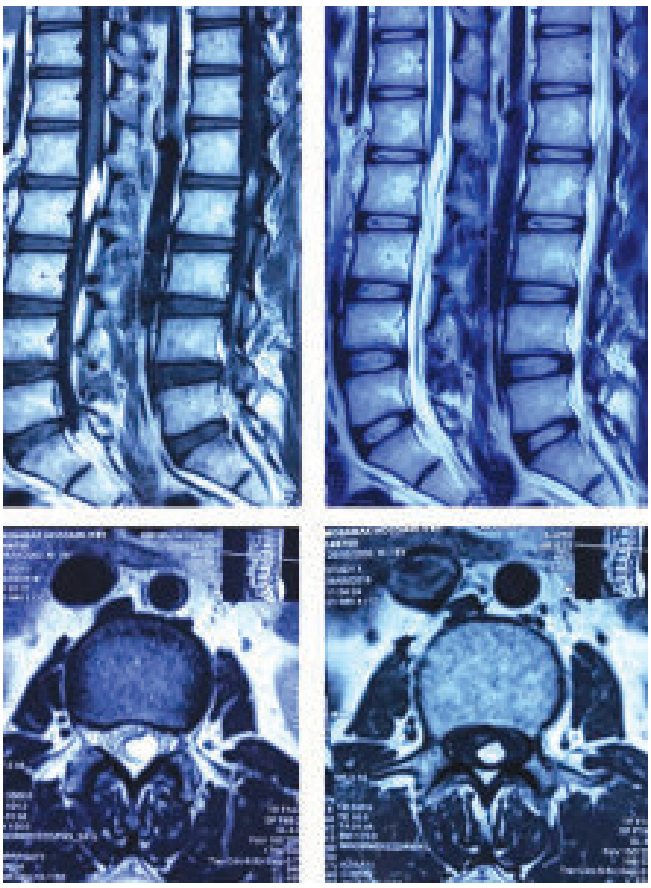
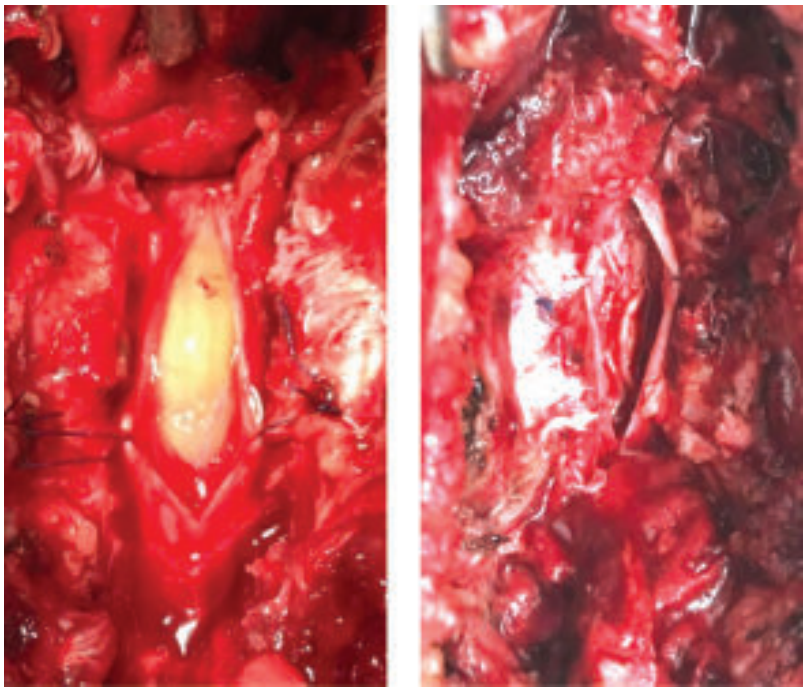


Fig.-1: *MRI of the Lumbosacral spine axial and coronal section showing an elongated hyper intensity at L-1 and L-2 vertebral level in both T-1 and T-2 images.*



(a) *(b)*

Fig.-2: *Per-operative picture showing lipoma after durotomy (a) and after total excision of the lipoma (b).*

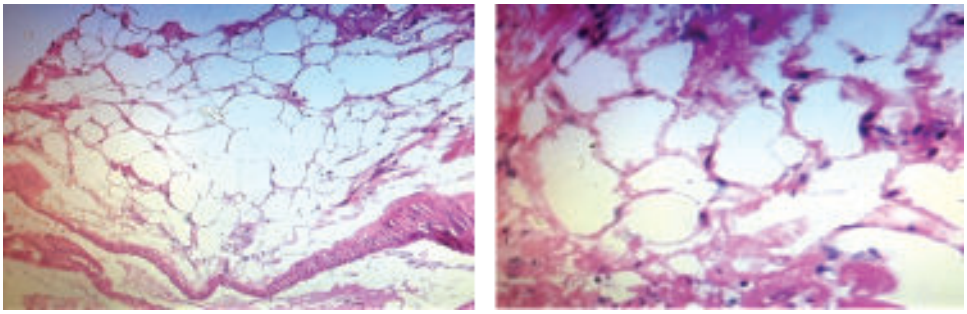


Fig.-3: *Histopathological photograph of the lesion proved lipoma.*

Discussion:

In 1945 Ehni and Lore first described seven cases of intradural lipoma not associated with spinal dysraphysm as a distinct entity[6]. The origin of the intardural lipomas without spinal dysraphysm has been an issue of debate. Many theories have been postulated as proliferation of adipose cells, deposition of fat in connective tissues or metaplastic differentiation of persisting embryonic meninges. Intradural lipomas can be intradural, subpial or juxtamedullary in location. The lesion is elongated in shape and may involve several segments. Since it most frequently located in the posterior aspect of spinal canal patients often presents with dorsal column dysfunction including ataxia and numbness of extremities. The treatment of choice of intradural lipoma is surgical resection. As lipomas adhere closely to the adjacent spinal parenchyma, they generally cannot be entirely resected and the aim of surgery is decompression[7]. Because these lesions are typically very slow growing, a very satisfactory and long-lasting clinical effect may be obtained after achieving a subtotal excision[3]. Early diagnosis and treatment gives better outcome.

Conclusion:

Intradural spinal lipomas are not a frequent spinal space occupying lesion, they are associated with varied neurologic deficits and early surgical decompression without attempts for complete excision is an ideal therapeutic option associated with satisfactory neurologic improvement and serial MRI for follow-up is mandatory.

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