

CASE REPORT

OSTEOCHONDROMA ARISING FROM SPINOUS PROCESS OF L2, L3, L4 VERTEBRAE WITHOUT SPINAL CORD COMPRESSION: A RARE PRESENTATION

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ABSTRACT: We here with present a case of osteochondroma arising from the spinous process of L2, L3, L4 vertebrae (Rt. Side) in a 28 years old male, labourer by profession presented to our hospital OPD on 08/11/2012 with chief complaint of progressive swelling over the Rt. paraspinal area of lumbar spine for last 1yr. Pain and swelling were gradually increasing. There was no h/o- fever, cough or weight loss or urinary complaints or any sensory or motor involvement. X-ray showed increased density solitary mass at lumbar region (L2, L3, L4). MR imaging showed it to be contiguous with the spinous process of lumbar vertebrae - L2, L3, L4 suggesting the diagnosis of osteochondroma, a rare presentation without cord compression, and distinguishing the lesion from a calcified disk fragment. After thorough investigation we have excised the tumor and sent for histopathological examination. No residual deficit was found post-operatively. Patient was relieved of the symptoms and is now under follow-up.

KEYWORDS: Osteochondroma of spinous process of Lumbar spine.

INTRODUCTION: Osteochondroma is a common benign tumor of long bones around knee & shoulder joints. It commonly occurs in childhood & early adolescents. Osteochondromas are rarely found in the spine, when present in the spine, however, have a predilection for cervical or upper thoracic region arising usually from lamina of vertebrae and are rare in lumbosacral region and very rare at spinous process of the vertebrae. However, this tumor rarely involves the spine and even more rarely involves the lower lumbar region.^[1] They represent 2% of all tumors and 2.6% of the benign tumors of the spine.^[2] Presentation of these tumors in spine is usually circumscribed to the cervical and upper thoracic regions with few tumors presenting in the lumbosacral vertebrae.^[3,4,5] Osteochondroma actually represent a developmental physal growth defect. The defect occurs in circumferential ring of fibrous tissue (Perichondrium), "The ring of Ranvier" covering the epiphyseal plate. Results of such a defect are lateral growth of epiphyseal cartilage plate instead of normal downward growth towards the metaphysis. This abnormal growth gives rise to a lateral cartilage protuberance. Whether a stalk or sessile all osteochondromas have direct communications with the cortex and the marrow cavity of the underlying bone. The osteochondromas stop growing at the time nearest epiphyseal plate fuses.

CASE REPORT: 28 yrs male laborer by profession presented to our hospital OPD on 08/11/2012 with C/C of progressive swelling over the Rt. paraspinal area of lumbar spine for last 1yr. Pain and swelling were gradually increasing. There was no h/o- fever, cough or weight loss or urinary complaints or any sensory or motor involvement. Clinical examination revealed: Hard lump, fixed

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with bone, non mobile, 4cm×6cm in dimension, tender on deep palpation. Overlying skin was free, local temperature normal & no discharging sinus. MRI scan showed Rt. L2, L3, L4 Paraspinal lobulated, non-enhancing mixed signal intensity fatty tissue and bone forming mass. As patient was complaining of pain and increasing size of the swelling. Through Para midline approach mass was dissected out and was found to be arising from L2, L3, L4 spinous process. Histopathology showed endochondral ossification on the basal surface of hyaline cartilage, so it resembles a normal growth plate with rows of chondrocytes. The cartilage is more disorganized than normal, has binucleate chondrocytes in lacunae, and is covered with a thin layer of periosteum. No evidence of malignant cells were found.

DISCUSSION: Osteochondroma is more frequent in male and patients are usually under the age of 20.^[3,4,5] From 1-4% of osteochondromas involve the spine and are commonly included in the posterior elements of the vertebrae. Osteochondroma has a predilection for the cervical and upper thoracic regions and, as it is in our case, rarely involve Lumbosacral region of the spine.^[6] However the actual incidence is likely to be under estimated because patients are usually asymptomatic. MRI scan imaging is the best radiological modality for evaluating hyaline cartilage cap. Differential diagnosis of such lesions include enchondroma, osteoblastoma, osteoid osteoma, chondroblastoma, hemangioma and chondrosarcoma. Osteochondromas are frequently asymptomatic and development of pain may signify malignant transformation.

CONCLUSION: Osteochondroma of L2, 3, 4 vertebrae is a rare location. Patient is 28yrs old, so age of presentation is unusual. The lesion was excised en-block & HPE confirmed the lesion to be osteochondroma.

REFERENCES:

1. Samartzis D, Marco RA: Osteochondroma of the sacrum: A case report and review of the Literature. *Spine* 2006, 31 (13): e420-429.
2. Carrera JE, Castillo PA, Molina OM: Lumbar Osteochondroma and radicular compression. A Case Report. *Acta Orthop Mex* 2007, 21 (5): 261-266.
3. Nejmi K, Ali D, Nebi Y: A Giant Cervical Osteochondroma. *Eur J Gen Med* 2005, 2 (3): 120-122.
4. Arasil E, Erdem A, Yuceer N: Osteochondroma of the upper cervical spine: A case report. *Spine* 1996, 21: 216-218.
5. Ratliff J, Voorhies R: Osteochondroma of the C5 Lamina with cord compression: Case report and review of the Literature. *Spine* 2000, 25: 1293-1295.
6. Fiumara E, Scarabino T, Guglielmi G, Bisceglia M, D'Angelo V: Osteochondroma of the L-5 vertebra: a rare cause of sciatic pain. Case report. *J Neurosurg* 1999, 91 (Suppl 2): 219-222.

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Fig. 1: (X-Ray LS Spine AP view)



Fig. 2: (X-Ray LS Spine LAT View)

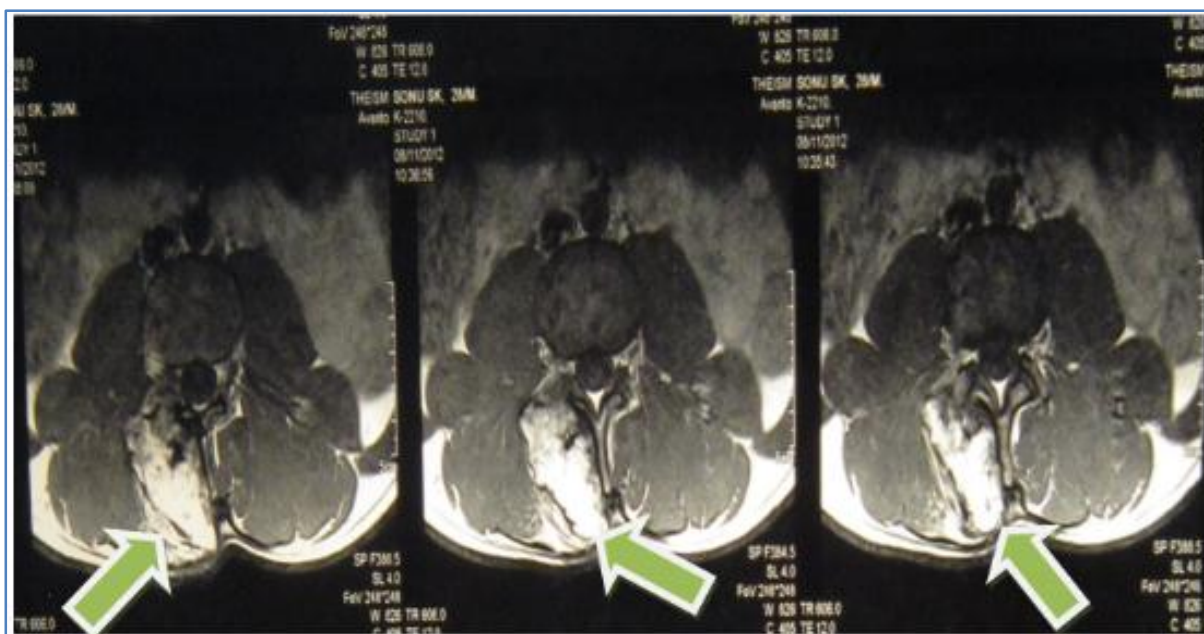


Fig. 3: (MRI showing hyperintense lesion on T1-Axial)

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Fig. 4: (MRI showing hyperintense lesion on T2-sagittal)



Fig. 5: (Pre-op clinical photo)



Fig. 6: (Excised osteochondroma mass)

Fig. 7: (Endochondral ossification on the basal surface of hyaline cartilage so it resembles a normal growth plate with rows of chondrocytes. The cartilage is more disorganized than normal, has binucleate chondrocytes in lacunae, and is covered with a thin layer of periosteum).

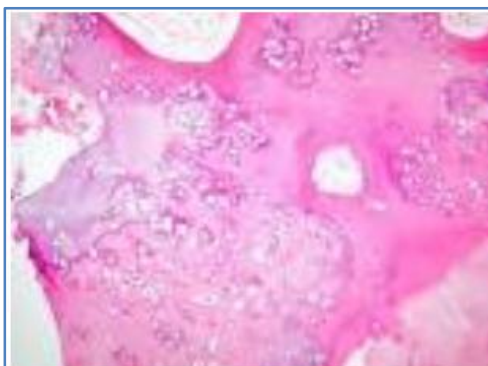


Fig. 7

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Fig. 8: (Post-op clinical photo showing surgical scar)

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