

Pediatric Intervertebral Disc Calcification Causing Cord Compression –A Rare Presentation.

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ABSTRACT

Intervertebral disc calcification in children is rare. We present a case of a 9yr old boy with acute neck pain and restricted neck movements without any antecedent trauma. Initial radiograph showed calcification of C4-5 disc. MRI demonstrated posterior disc herniation causing cord compression. The symptoms resolved with conservative treatment. It is a benign self limiting condition in children with most cases resolving with conservative treatment.

Keywords: Intervertebral disc calcification, Pediatric, MRI.

INTRODUCTION

Pediatric intervertebral disc calcification is a rare benign condition. It can affect any part of spine but most commonly seen in children in cervical spine. It usually follows a benign course and resolves with conservative treatment.

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CASE REPORT

A 9 year old boy presented with acute onset of neck pain and restricted motion. There was no antecedent trauma or clinical features suggestive of infection. No neurologic deficits were noted. Initial plain radiograph of cervical spine [Figure 1] showed calcification of C4-5 disc. Further MRI of cervical spine [Figure 2 & 3] was performed which revealed calcified C4-5 disc. There was posterior herniation of the calcified disc more on left causing cord compression. No altered signal was seen in cervical cord. Vertebral bodies were normal.

The child was kept on conservative treatment. After one month there was marked resolution of symptoms.

DISCUSSION

Pediatric IV disc calcification is a rare condition. Intervertebral disc calcification was first described by Luschka in 1858.1 Baron in 1942 first described it in children.^[2]



Figure 1: Plain radiograph lateral cervical spine showing calcified C4-5 disc.



Figure 2: MRI cervical spine T2 sagittal showing low signal calcified disc between C4 and C5 bodies with cord compression.

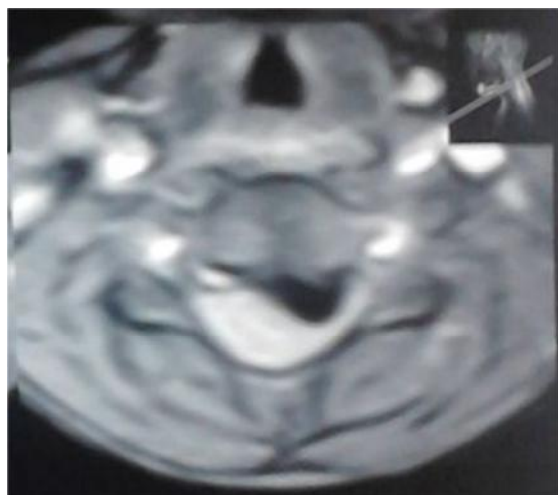


Figure 3: MRI cervical spine axial T2 sequence showing posterior herniation of C4-5 disc on left and causing cord compression.

In the adult, the discs in the thoracic and upper lumbar spines are frequent sites of calcification.^[3] Most cases in children are in cervical spine.^[4] No definite etiology has been found although factors like trauma and inflammation have been implicated. Other recognised causes of calcification in adults including haemochromatosis, chondrocalcinosis and hyperparathyroidism have never been incriminated.^[4]

The calcified disc material can herniate anteriorly into the prevertebral soft tissue or posteriorly into the spinal canal.^[5]

Imaging plays an important role in the diagnosis of this condition. Plain radiographs show intervertebral location of calcifications. MRI is valuable when there is neurological deficit. MRI is a better modality for the demonstration of reduced intervertebral disc signal intensity, herniated disc, or signs of inflammation.^[6-8] In a study by Falcone et al.^[7], enthesopathy and edema in the vertebral spongy bone and herniated disc were demonstrated on MRI in the posterior longitudinal ligament. In our case there was posterior herniation of calcified disc with cord compression. However there were no neurological deficits.

CONCLUSION

IV disc calcification is a rare condition in children. It can cause nonspecific symptoms like neck pain and torticollis. Herniation of calcified disc can cause cord compression. However most of the cases follow a benign course and respond to conservative treatment.

REFERENCES

1. Sandstrom C. Calcifications of the intervertebral discs and the relationship between various types of calcifications in the soft tissues of the body. *Acta Radiol* 195 1;36:217-33.
2. Baron A. Uber eine neue Erkrankung die Wirbelsaule. *Jahrb Kinderheilkd*.1924;104:357-60.
3. Taylor TK, Ghosh P, Bushell GR, Stephens RW. The scientific basis of the treatment of intervertebral disc disorders. In: Owen R, Goodfellow J, Bullough P, eds. *Scientific Foundation of Orthopaedics and Traumatology*. London: William Heinemann Medical Books, 1980: 387-406.
4. Sonnabend DH, Taylor TK, Chapman GK. Intervertebral disc calcification syndromes in children. From the Royal Alexandra Hospital for Children and The Royal North Shore Hospital, Sydney
5. Garg M, Kumar S, Satija B, Gupta R. Pediatric intervertebral disc calcification: A no touch lesion. *Journal of Craniovertebral Junction and Spine*. 2012;3(1):23-25.
6. Gerlach R, Zimmermann M, Kellermann S, Lietz R, Raabel A, Seifert V. Intervertebral disc calcification in childhood: a case report and review of the literature. *Acta Neurochir* 2001; 143:89-93.
7. Falcone L, Rossiello P, D'Addetta I, Martino F. Idiopathic intervertebral disc calcification in children: the role of diagnostic imaging. *Reumatismo* 2006; 58:62-65.
8. Bagatur AE, Zorer G, Centel T. Natural history of paediatric intervertebral disc calcification. *Arch Orthop Trauma Surg* 2001; 121:601-603.

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