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A Rare Case of Cervical Intramedullary Arachnoid Cyst

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Abstract
Intramedullary arachnoid cysts is a rare entity and occurs usually in childhood. Here we are reporting a case of intamedullary arachnoid cyst in adult with a uncommon location in cervical spine.
Keywords: *Intramedullary, Arachnoid Cyst, Adult, Cervical Region.*

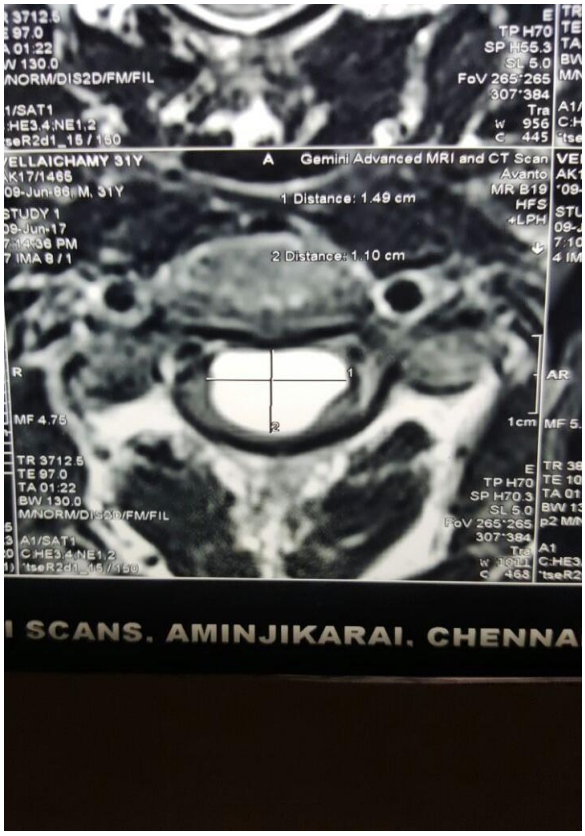
Background

Arachnoid cysts are a rare entity in the spinal cord, presenting as benign lesions usually passing off asymptomatically. Clinical manifestations appear on compression of cord or roots and consecutive neurologic symptoms. The arachnoid cysts in the spine have been classified by Nabors et al. as: Type 1-extradural cysts without spinal nerve roots; Type 2-extradural cysts with spinal nerve root fibers; Type 3-intradural cyst. Intramedullary spinal arachnoid cysts are considered to be very rare, and only 11 cases have been reported previously

Case Report

The patient is a 28yr old male with numbness in both upper limbs. He had no bladder and bowel disturbances and was normal. On examination, his tone, power and nutrition in all 4 limbs were normal. He had around 30% sensory loss in both upper limbs C3 and C4 dermatome only. He underwent C2, C3 and C4 laminectomy and Midline Myelotomy and partial excision of cystwall with fenestration after which, he had weakness of both upper limbs proximally and distal power was normal. He had no post op complications of wound and was discharged with a clean wound. He had power of 4/5 in both upper limbs in wrist joint whereas he had 2/5 in shoulders. He was discharged with the same and is under regular follow up. He has minimal power improvement in both upper limbs. 3 weeks post surgery he has the same power in the upper limbs and are planning for post OP MRI after 4 weeks of surgery.

MRI Images



Discussion

Spinal arachnoid cysts are rare, with the occurrence of intramedullary arachnoid cysts being the least as compared to the intradural extra medullary and extra dural arachnoid cysts. They are usually asymptomatic, but become symptomatic once the cyst starts compressing the cord or nerve roots. The most common presenting symptom is slowly progressive weakness in the limbs because of gradual and continuous enlargement of the cyst. MRI demonstrates the extent, size and nature of the cysts. The arachnoid cysts have similar intensities as that of CSF on T1 and T2 weighted images. T2-weighted MRI demonstrates heterogeneous signal intensity, depending on the flow effect in the cyst fluid. The imaging differential diagnosis includes-neurentric cysts, cystic teraromas, cysts associated with hemangioms, secondary to spinal tumors, post inflammatory cysts and post traumatic cysts. The origin of intramedullary arachnoids cysts is not yet well defined. Aithala described the first arachnoid cyst in intramedullary location Fortuna and Mercuri hypothesized that intramedullary arachnoid cysts arise as secondary cystic development of the atypical intramedullary arachnoids granulations that become trapped in various locations with consequent CSF production and hence, cyst formation. This view was also seconded by Goyal *et al.* As seen from the above published data, it is evident that even the intramedullary variant of arachnoids cysts are more common in the thoracic cord and the affected patients were mainly in the paediatric age group, more commonly in the first decade. Whereas the two case reports published by Goyal and Gezici, the affected patients were of 63yr and 35yr old respectively. Our 54 yr old female patient is the third case of symptomatic intramedullary arachnoid cyst in the adult age group.

Conclusion

Spinal intramedullary arachnoid cyst though rare should be considered as a differential diagnosis even in adults and surgical decompression affords

good clinical results. Surgical decompresson with marsupilisation gives the best results.

References

1. Zekaj E, Saleh C, Servello D. Intramedullary cyst formation after removal of multiple intradural spinal arachnoid cysts: A case report.Surg Neurol Int. 2016 Jul 7;7(Suppl 17):S473-4. doi: 10.4103/2152-7806.185779.
2. Alugolu R, Arradi V, Sahu BP. Intramedullary arachnoid cyst in an adult: Case report and review. Asian J Neurosurg. 2016 Jan-Mar;11(1):70. doi: 10.4103/1793-5482.145054.
3. Ishibe T, Senzoku F, Kamba Y, Ikeda N, Mikawa Y. Time-Spatial Labeling Inversion Pulse Magnetic Resonance Imaging of Cystic Lesions of the Spinal Cord. World Neurosurg. 2016 Apr;88: 693.e13-21. doi: 10.1016/j.wneu.2015.12.051. Epub 2015 Dec 28.
4. Thakar S, Hegde AS.A hemorrhagic cervical intramedullary arachnoid cyst. Spine J. 2016 Mar;16(3):e173-4. doi: 10.1016/j.spinee.2015.10.005. Epub 2015 Oct 22.
5. Qi J, Yang J, Wang G A novel five-category multimodal T1-weighted and T2-weighted magnetic resonance imaging-based stratification system for the selection of spinal arachnoid cysttreatment: a 15-year experience of 81 cases. Neurop-sychiatr Dis Treat. 2014 Mar 19;10:499-506. doi: 10.2147/NDT.S52517.
6. Novegno F, Umana G, Di Muro L, Fraioli B, Fraioli MF Spinal intramedullary arachnoid cyst: case report and literature review. Spine J. 2014 Jun 1;14(6):e9-15. doi: 10.1016/j.spinee.2013.10.051.
7. Rahimizadeh A, Soufiani H. Intramedullary arachnoid cyst in association with cervical spondylosis: case reportSpine J. 2013 Oct;13(10):e21-5. doi: 10.1016/j.spinee.2013.05.014.
8. Bond AE, Zada G, Bowen I, McComb JG, Krieger MD. Spinal arachnoid cysts in the pediatric population: report of 31 cases and a review of the literatureJ Neurosurg Pediatr. 2012 Apr;9(4):432-41. doi: 10.3171/2012.1.PEDS11391.
9. Kataria R, Sinha VD, Chopra S Intramedullary arachnoid cyst: report of two cases.Neurol India. 2012 Jan-Feb;60(1):123-4. doi: 10.4103/0028-3886.93618.
10. Diyora B, Kamble H, Nayak N, Dugad P, Sharma A, Thoracic intramedullary arachnoid cyst. Neurol India. 2010 Nov-Dec;58(6):964-6. doi: 10.4103/0028-3886.73774.