World Journal of Advanced Research and Reviews
eISSN: 2581-9615 CODEN (USA): WJARAI
Cross Ref DOI: 10.30574/wjarr
Journal homepage: https://wjarr.com/

(CASE REPORT)

Check for updates

Intradural extramedullary epidermoid cyst: Case report

Nabil NIA *, Hamza SRIRI, Oualid Mohammed HMAMOUCHE, Marouane HAMMOUD, Faycal LAKHDAR, Mohammed BENZAGMOUT, Khalid CHAKOUR and Mohammed El Faiz CHAOUI

Department of Neurosurgery, Hassan II University Hospital. Fez Morocco.

World Journal of Advanced Research and Reviews, 2024, 22(02), 242–244

Publication history: Received on 17 March 2024; revised on 01 May 2024; accepted on 03 May 2024

Article DOI: https://doi.org/10.30574/wjarr.2024.22.2.1320

Abstract

Spinal epidermoid cysts are benign tumors. They are most commonly extramedullary intradural tumors. Intramedullary localization is the exception. In this review, we report the case of a 45-year-old patient with a dorsal intradural extramedullary epidermoid cyst, revealed by dorsal spinal pain and right lower limb weakness, we discuss the clinical aspects, radiological features, and neurosurgical treatment.

Keywords: Extramedullary; Epidural cyst; Epidermoid cyst; MRI

1. Introduction

Epidermoid cysts are well-known tumors in neurosurgery. Initially described by Couvelaire in 1835. These benign lesions, which grow slowly and account for less than 1% of all intraspinal tumors. [1-2].

The typical location is intradural extramedullary, rarely intramedullary. The intramedullary location is exceedingly rare, with only 80 cases reported in the literature mainly in young subjects. [2-3]. They are most often congenital in origin. Treatment is exclusively surgical.

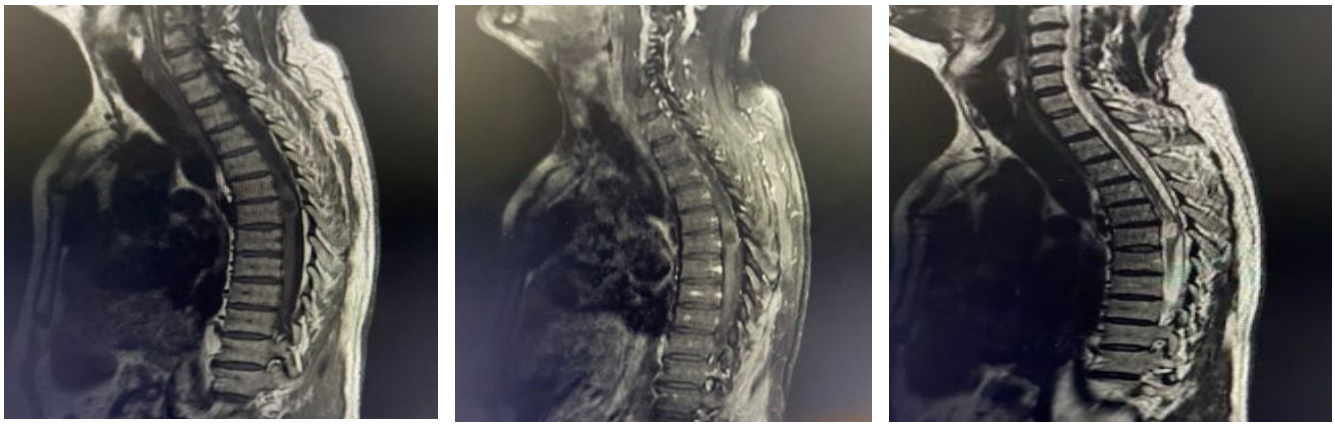
2. Case report

We report the case of a 45 years old, was admitted to our department for back pain, with progressive right lower limb weakness.

The first examination showed a monoparesis of the right lower limb, with a spinothalamic pathway associated with pyramidal symptoms.

MRI examination showed a Centromedullary intra-dural lesion around D5-D6, with an ovoid shape, hyperintense signal T1, hyperintense signal T2, and Flair, slightly enhanced after injection of Gadolinium (Figure 1).

* Corresponding author: N NIA



A B C

Figure 1 MRI Features of spinal epidermoid cyst

T1: hypointense (similar to CSF); T1 C+ (Gd): no enhancement or a thin rim of capsular enhancement; T2: hyperintense (similar to CSF)

2.1. Surgical management

Surgery is the treatment of choice. Complete excision is usually possible and is curative. 5 If the cyst wall is tightly adherent to the cord parenchyma, the wall should be left in place, however, this leads to a risk of recurrence.

The patient was operated on using a posterior dorsal spinal approach, laminectomy D5-D6 with macroscopically total resection of the tumor (Figure 2).

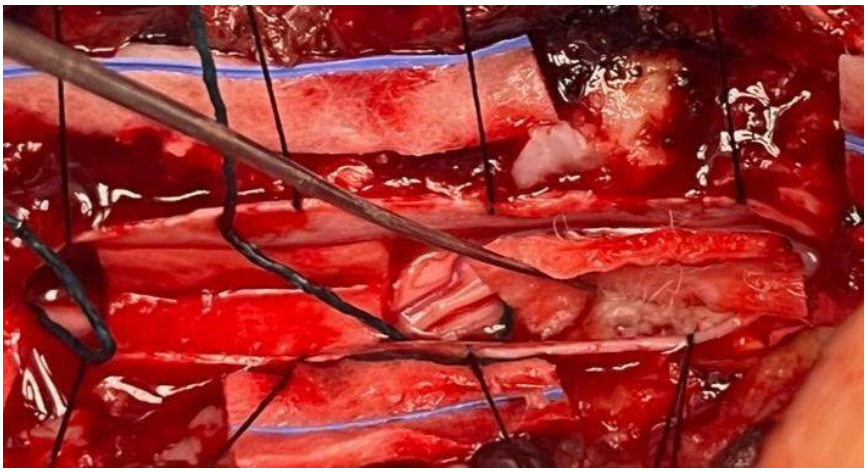


Figure 2 Surgical view after durotomy

3. Histology

The histological analysis of the biopsy confirmed the diagnosis of epidermoid cyst which was a cystic formation lined with flat squamous epithelium with no granular tissue. The lumen of the cyst contained multiple lamellae of concentric keratin, calcified in some areas.

4. Discussion

Epidermoid cysts are benign. Histologically, they consist of stratified squamous epithelium supported by an outer layer of collagenous tissue. Progressive desquamation and breakdown of keratin from the epithelial lining into the interior of the cyst produce the characteristic content

The pathogenesis of medullary epidermoid cysts can be subdivided into two groups: acquired and congenital [4_5].

Congenital spinal epidermoid cysts result from anomalous implantation of ectodermal cells during the closure of the neural tube between the third and fifth week of embryonic life, this form has been described in children often associated with spinal dysraphism.

Acquired epidermoid cysts emerge as a late complication of lumbar puncture procedures, this phenomena results from the inadvertent introduction of epidermal elements into the spinal canal during the puncture processes.

Remarkably, the latency period between the initial lumbar puncture and the eventual diagnosis of spinal epidermoid cysts can span anywhere from 1 to more 20 years [6]. Underscoring the insidious nature of this pathology [7-8].

5. Conclusion

Spinal epidermoid cysts represent a fascinating yet clinically significant entity within spinal pathology, elucidating their diverse etiological pathways, characteristic clinical presentations, and evolving diagnosis paradigms.

This paper aims to deepen our understanding of these enigmatic lesions and optimize their management for improved patient outcomes.

Compliance with ethical standards

Disclosure of conflict of interest

The authors no conflict of interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

References

[1] Hussen E, Aboye S, Leake M, Nuredin Abrar F. Intramedullary Epidermoid Cyst of the Conus Medullaris: A Case Report and Literature Review. Int Med Case Rep J. 2023 Sep 12; 16:521-527. doi: 10.2147/IMCRJ.S430853. PMID: 37720363; PMCID: PMC10505022.

[2] Graillon T, Rakotozanany P, Meyer M, Dufour H, Fuentes S. Intramedullary epidermoid cysts in adults: Case report and updated literature review. Neurochirurgie. 2017 May;63(2):99-102. doi: 10.1016/j.neuchi.2017.01.004. Epub 2017 May 8. PMID: 28495229.

[3] panelBabak Alijani a c, Sahand Karimzadhagh b, Elahe Abbaspour b, Zoheir Reihanian a c, Mohammad Haghani Dogahe c, Nooshin Zaresharifi d Intradural intramedullary epidermoid cyst in a 17-year-old male: An exceptionally rare case report and review of the literature International Journal of Surgery Case Reports Volume 116, March 2024, 109331.

[4] CHANDRA PS, MANJARI T, DEVI BI, CHANDRAMOULI BA, SRIKANTH SG, SHANKAR SK. Intramedullary spinal epidermoid cyst. Neurol India 2000; 48:75-7.

[5] ROUX A, MERCIER C, LARBRISSEAU A, DUBE LJ, DUPUIS C, DEL CARPIO R. Intramedullary epidermoid cysts of the spinal cord. Case report. J Neurosurg 1992; 76:528-33.

[6] Issaivanan M, Cohen S, Mittler M, Johnson A, Edelman M, Redner A. Iatrogenic spinal epidermoid cyst after lumbar puncture using needles with stylet. Pediatr Hematol Oncol 2011;28(7):600–3.

[7] Per H, Kumandas S, Gumus H, Yikilmaz A, Kurtsoy A. Iatrogenic epidermoid tumor: late complication of lumbar puncture. J Child Neurol 2007;22(3):332–6

[8] CATALTEPE O, BERKER M, AKALAN N. A giant intramedullary spinal epidermoid cyst of the cervicothoracic region. Pediatr Neurosurg 2004; 40:120-3.