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NEURO-IMAGES

Isolated intramedullary cervical dermoid cyst

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A 65-year-old male was admitted because of 2-month history of left arm weakness. Spinal MRI showed a cervical intramedullary lesion whose features suggested a dermoid cyst (Fig. 1 a, b). No spinal dysraphisms were evident. At operation (under neurophysiological monitoring), after a C2–C5 laminotomy, dural opening and myelotomy, the lesion appeared composed of two components: cranially the cyst was filled with caseous yellowish and pearly material which was removed; caudally the lesion presented calcified material which was only partially removed because it was very adherent to the surrounding neural tissue (Fig. 1 c, d). Post-operative course was characterized by worsening of left arm weakness and onset of moderate weakness of legs. Histological examination confirmed the presence of keratin debris and bone suggesting a diagnosis of dermoid cyst.

Intramedullary dermoid cysts are extremely rare, accounting for less than 1 % of intramedullary spinal cord tumors [1]. They arise from cell remnants due to a failure of embryological process involved in the neural tube closure [1]. This process begins in the area of the neural tube destined to become the lower cervical cord and proceeds rostrally and caudally [1]. Hence these cysts are more often located in the lumbosacral spine. As the result of an embryological defect, they are usually associated with spinal dysraphism or dermal sinus tracts and thus are commonly seen during the first decade of life [1, 2]. Although some cases of isolated cervical dermoid cyst have previously been reported, most of them were published in pre-MRI era [1]. Dermoid cysts can be differentiated from intrinsic glial tumors of the cord on the basis of heterogeneity of the T1- or T2-weighted signal, lack of contrast enhancement, and signal characteristics consistent with lipid content [1]. To our knowledge only two papers reported detailed description of MRI and intraoperative features of isolated cervical dermoid cysts [1, 2]. Both cases came to surgery because patients were symptomatic. Odgen et al. [1] report on a case of a 23-year-old man with a 3-month history of symptoms consistent with myelopathy, including hand weakness and paresthesias and an unsteady gait. Patankar et al. [2] describe the case of an 18-year-old female with a gradual appearance of spastic tetraparesis. In these two cases, at operation, the cyst wall was found to be very adherent to the adjacent neural tissue and only a subtotal resection was performed to avoid spinal cord damage [1, 2], as in our case. Nonetheless the morbidity remains high even with subtotal resection, with two patients (Pantakar et al. [2], and present case) worsened after the operation. Considering the benign nature of these congenital lesions and the significant risks related with the operation a conservative management should be considered for asymptomatic patients.

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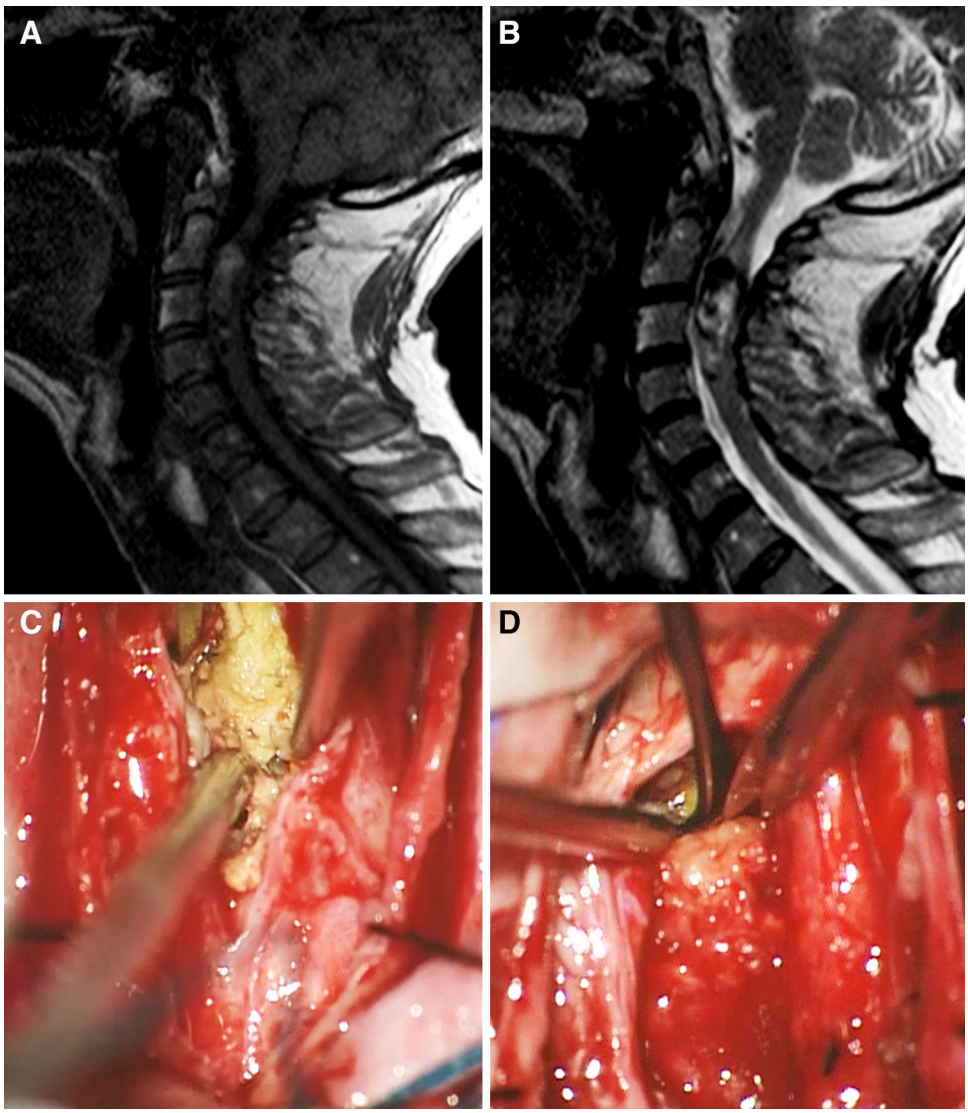

Fig. 1 Spinal MRI showing the lesion composed by a dishomogeneous cranial portion hyperintense on T1-weighted images (**a**) and a caudal one mostly hypointense on T2-weighted sequences (**b**) with a pseudonodular contrast enhancement after gadolinium injection (not showed). On intraoperative view **c** the caseous and pearly material in the cranial portion of cyst and **d** the bony component in the caudal one are evident

Conflict of interest The authors declare no conflict of interest

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