Parachordoma of skull

Parachordome du crâne

A 63-year-old man presented with decreased function, and numbness and tingling sensations in the left limbs, of around one month’s duration. Physical examination revealed a firm, palpable mass on the right side of his skull that measured approximately 4 × 5 cm in size. There was no bruit, thrill or tenderness with palpation over the mass. Muscle strength in the left limbs was grade IV to V. Laboratory values were all within normal limits. Magnetic resonance imaging (MRI) demonstrated a well-defined mass, measuring 4.6 × 3.6 × 1.8 cm, located in the right parietal bone of the skull and involving the diploic space. The mass showed mild hypointensity on T1-weighted images, and heterogeneous hyperintensity on T2-weighted images. There was evidence of erosion of the inner table of the skull and compression of the underlying brain tissue, with edema in the subjacent white matter. Erosion of the outer table of the skull was also seen, with reactive hyperintensity in the subcutaneous soft tissue on T2-weighted images (Fig. 1). The final pathological diagnosis based on the surgically removed mass was consistent with parachordoma. No recurrence was seen for 15 months following the operation.

Parachordoma was classified as a mesenchymal tumor in the 2007 World Health Organization classification, and myoepithelioma is included in the same category (ICD-O code 9373/1). Fewer than 50 cases have been reported in literature [1]. There is no significant gender predominance. The limbs (especially the lower extremities) are the most common sites of involvement, and the mass is often seen near muscle tendon, synovium or bony structures. The chest, abdomen and back are the next most common sites of involvement, and individual cases have involved the buttocks, pelvis, groin and nares [1–3]. In the present case, the mass was located in the right parietal bone of the skull, and is the first reported case of primary cranial parachordoma characterized by MRI.

Parachordoma is a soft tissue tumor characterized by an indolent (slow-growing) nature, with late recurrence on occasions and a potential for metastases, and at least five fatalities have been reported. All tumor masses were completely encapsulated, with lobulated nodular margins and a tendency for expansive growth, resulting in compression of the surrounding tissue. Occasionally, infiltration into the surrounding tissue may occur. Parachordoma has a variable degree of malignant potential.

Diagnosis based solely on imaging findings may be difficult, and it should be included in the differential diagnosis of lytic skull lesions, extra-axial chordoma, Langerhan’s histiocytosis, aneurysmal bone cyst, atypical meningioma and plasmacytoma. The final diagnosis of parachordoma depends on the pathological findings. It is composed of three cell types—specifically, epithelioid cells, smaller glomoid cells and spindle cells. Light microscopy reveals features such as cells in clusters, nodules and whorls, and a pseudoglandular formation of rounded cells in a focally myxoid stroma separated by fibrous tissue. In general, nuclei are bland, mitotic.
figures are rare and there is no necrosis or vascular invasion. All lesions show a population of cells with vacuolated cytoplasm resembling the physaliferous cells found in chordoma [4,5].

Conflict of interest statement

None.

References


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IRM d’une métastase d’un carcinome rénal dans un méningiome

A 61-year-old man had undergone resection of left renal cancer in 1999. In May 2005, he developed a continuous headache and MRI showed a left frontal convexity meningioma, 25 × 15 mm in size, with typical imaging features (Fig. 1). The mass was homogeneously isointense to the gray matter on T1- and T2-weighted images, with strong and homogeneous enhancement after gadolinium administration and a typical “dural tail sign”. There was no edema of the adjacent white matter and imaging findings were unchanged at follow-up MRI in March 2006. In November 2006, the patient developed progressive motor aphasia together with changes in behavior. MRI showed enlargement of the mass, whose size reached 30 × 41 mm, with marked peritumoral edema and a mild midline shift (Fig. 2). The signal intensity became inhomogeneous on T2-weighted images with appearance of intra- and peritumoral flow voids. T1-weighted images showed an irregular enhancement with a cystic-necrotic center. A malignant transformation of the meningioma was hypothesized and a left frontal craniotomy was performed. Pathologic examination demonstrated clear cell carcinoma with widespread necrosis occupying the majority of the lesion, indicating brain metastasis (Fig. 3). Meningothelial meningioma was recognizable only at the peripheral rim. Subsequent exam-

Figure 1 First MRI. (A) T2W axial section; (B) Postcontrast T1W coronal section. Left frontal meningioma (arrow), isointense to the cortex in T2-W images without perifocal edema, characterized by strong and homogeneous enhancement after gadolinium administration. On the basis of absent neurological signs and symptoms, surgery was not indicated.

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