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· 临床医学图像 ·

小脑毛细血管型星形细胞瘤

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Cerebellar pilocytic astrocytoma

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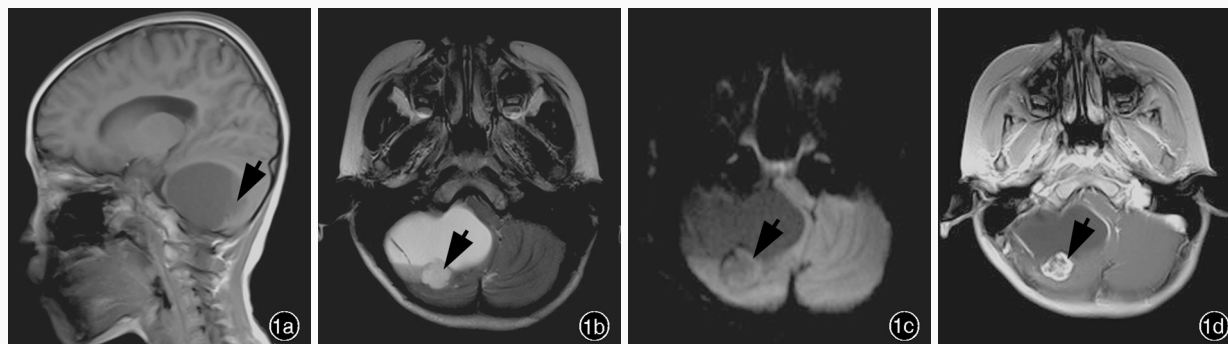


图1 男性患者, 15岁, 主因进行性头痛加重, 于2014年6月就诊。头部MRI检查显示右侧小脑占位性病变。行肿瘤切除术, 术后病理检查证实为毛细血管型星形细胞瘤 1a 矢状位T<sub>1</sub>WI显示, 右侧小脑半球囊性占位性病变, 边界清晰, 囊壁薄厚均匀, 囊液呈低信号, 信号略高于脑脊液, 病变后部可见略低信号附壁结节(箭头所示) 1b 横断面T<sub>2</sub>WI显示, 高信号附壁结节位于囊性病变后壁(箭头所示), 病变内可见液液平 1c 横断面DWI显示, 附壁结节呈等信号(箭头所示) 1d 横断面增强T<sub>1</sub>WI显示, 囊壁呈节段性线样强化, 附壁结节明显强化(箭头所示)

Figure 1 A 15-year-old male had suffered from progressive headache and came to the clinic in June 2014. MRI showed a space-occupying lesion in the right cerebellum. Then an exploratory craniotomy was performed and postoperative pathological diagnosis was pilocytic astrocytoma. Sagittal T<sub>1</sub>WI showed predominantly cystic lesion in the right cerebellum with clear boundary. The cystic walls were thin and thickness was even with a mural nodule attached within the posterior wall of the lesion. The cyst fluid showed hypointensity, which was slightly higher than cerebrospinal fluid. The mural nodule showed slight hypointensity (arrow indicates, Panel 1a). Axial T<sub>2</sub>WI showed a well-defined hyperintensity mural nodule in the posterior wall of the lesion (arrow indicates). Fluid-fluid levels could be seen within the lesion (Panel 1b). Axial DWI showed isointensity of mural nodule (arrow indicates, Panel 1c). Axial enhanced T<sub>1</sub>WI showed discontinuously linear enhancement of the wall and significant enhancement of the nodule (arrow indicates, Panel 1d).

毛细血管型星形细胞瘤是一种生长缓慢、预后相对良好的星形细胞肿瘤,属WHO I级, 占有胶质瘤的5%~10%。发病年龄<20岁, 高峰年龄5~15岁; 男女比例无差异。好发于小脑(60%), 其次为下丘脑、视神经和视交叉(30%), 脑干和基底节区少见, 大脑半球和脊髓罕见。位于小脑者体积相对较大, 范围局限, 典型征象为大的囊性病变伴附壁结节, 或实性病变伴病灶中心不规则囊性坏死, 少见单纯实性或囊性改变; 位于视交叉或下丘脑者常呈实性, 体积相对较小。CT显示, 10%~20%病灶内可见钙化, 出血少见, 常伴不同程度囊性变; MRI显示, 囊液呈长T<sub>1</sub>(图1a)、长T<sub>2</sub>(图1b)信号, 略高于脑脊液, FLAIR成像呈高于脑脊液信号, 附壁结节和实性部分呈T<sub>1</sub>WI不均匀等或略低信号(图1a), T<sub>2</sub>WI不均匀略高信号(图1b), DWI呈等或略低信号(图1c), ADC图无扩散受限改变, GRE/SWI可见附壁结节和实性部分内多发点片状低信号, 可能为肿瘤新生血管所致; 部分病变囊腔内可见液液平, 囊壁呈线样低信号, 提示病灶内出血伴囊壁含铁血黄素沉积; 增强扫描实性部分和附壁结节呈明显不均匀强化, 囊壁不强化或轻中度线样强化(图1d), 前者提示囊壁由退变的神经胶质细胞和纤维构成, 后者提示囊壁含肿瘤组织和新生血管, 应予手术切除。实性部分的明显强化是由于肿瘤新生血管通透性较高所致, 与肿瘤恶性程度无关。PWI显示实性部分和附壁结节呈高灌注。值得注意的是, 尽管MRS显示胆碱(Cho)峰值明显升高, 但不代表该肿瘤有恶性生物学特性。

(天津市环湖医院神经放射科韩彤供稿)