Evaluation of immunofluorescence cytochemical staining and laser - scanning confocal microscopy in the diagnosis of meningeal carcinomatosis. Zhongguo Xian Dai Shen Jing Ji Bing Za Zhi, 2011, 11:534-537.[窦春阳, 范学文, 吴若芬, 朱海清, 陈桂生, 孔繁元. 免疫荧光细胞化学染色联合激光扫描共聚焦显微技术对脑膜癌病的诊断价值. 中国现代神经疾病杂志, 2011, 11:534-537.]

[19] Brem SS, Bierman PJ, Black P, Blumenthal DT, Brem H, Chamberlain MC, Chiocca EA, DeAngelis LM, Fenstermaker RA, Fine HA, Friedman A, Glass J, Grossman SA, Heimberger AB, Junck L, Levin V, Loeffler JJ, Maor MH, Narayana A, Newton HB, Olivi A, Portnow J, Prados M, Raizer JJ, Rosenfeld SS, Shrieve DC, Sills AK Jr, Spence AM, Vrionis FD, National Comprehensive Cancer Network. Central nervous system cancers: clinical practice guidelines in oncology. J Natl Compr Canc Netw, 2005, 3:644-690.

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·临床医学图像·

颅内海绵状血管瘤

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Intracranial cavernous angioma

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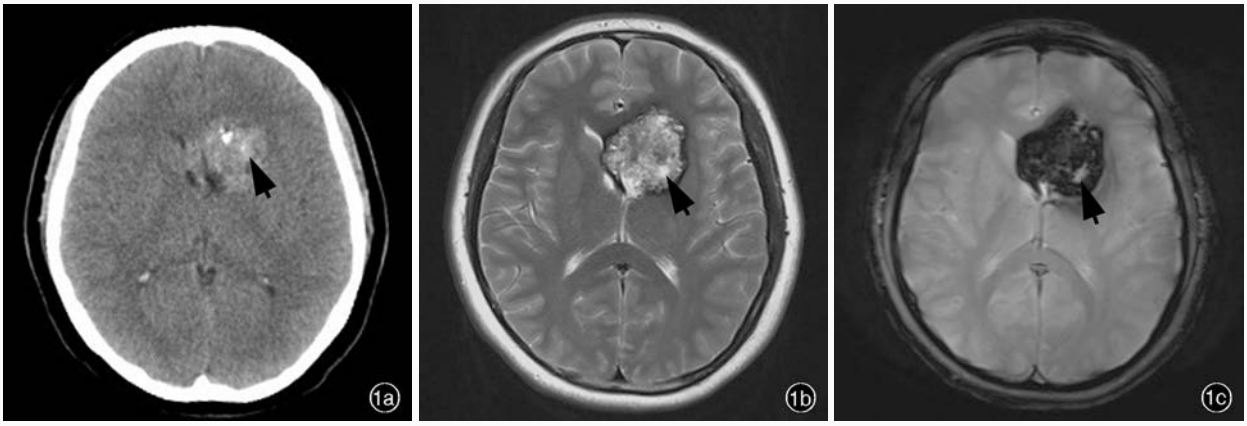

图1 女性患者，24岁。病理诊断为左侧基底节及鞍上海绵状血管瘤。头部影像学检查所见 1a CT扫描显示，左侧基底节区类圆形高密度影，病灶内可见斑片样钙化（箭头所示） 1b 横断面T_2WI序列显示，左侧基底节区病变呈典型“爆米花征”（箭头所示），周围包绕完整的含铁血黄素环，未见明显水肿，左侧侧脑室受压 1c 横断面GRE序列显示病灶内明显低信号（箭头所示）

Figure 1 A 24-year-old female patient was diagnosed as left basal ganglia and suprasellar cavernous angioma. Cranial imaging findings. CT showed a round high-density lesion in the left basal ganglia with patchy calcification within it (arrow indicates, Panel 1a). Axial T_2WI showed a round mixed signal lesion with typical popcorn sign (arrow indicates) surrounded by a well-defined intact hypointense ring composed of hemosiderin, and without edema surrounding the lesion. The left lateral ventricle was compressed (Panel 1b). Axial GRE showed hypointense within the lesion (arrow indicates, Panel 1c).

海绵状血管瘤（CM）是较为常见的隐匿性脑血管畸形，常规脑血管造影不能显示病变。可发生于任何年龄，发病高峰为30～60岁，男女比例相等。有反复出血倾向，常呈自限性；病灶内可合并血栓和钙化。影像学可见病灶内不同演变时期的出血产物，周围组织可见陈旧性出血所致含铁血黄素沉积。X线检查仅见钙化，难以定性诊断。脑血管造影常无异常发现，合并静脉畸形时可见静脉聚集。CT检查显示，病灶多呈类圆形或分叶状略高密度影，不均匀，其内可见钙化和出血，病灶无明显占位征象和水肿。有30%～50%的海绵状血管瘤CT检查可无异常表现。MRI检查为首选诊断方法，可直接显示病灶内不同时期的出血征象（T_1WI和T_2WI序列）及其周围含铁血黄素沉积[梯度回波序列（GRE）和磁敏感加权成像（SWI）]。其典型征象为：（1）“爆米花征”。瘤体内不同时期的出血产物在T_1WI和T_2WI序列呈混杂信号，开花样改变。（2）“铁环征”。反复多次少量慢性出血导致含铁血黄素沉积，T_2WI和T_2*WI序列呈明显低信号，GRE或SWI序列更为敏感。（3）“黑点征”。多发性海绵状血管瘤在GRE或SWI序列显示颅内多发点状低信号；增强扫描一般无强化，少数轻度强化，但病灶内若出现大量急性出血可掩盖上述典型征象。单发海绵状血管瘤需与肿瘤卒中、小动-静脉畸形伴出血、其他隐匿性血管畸形伴出血等疾病相鉴别；多发者应与高血压性脑出血、脑血管淀粉样变性、弥漫性轴索损伤所致颅内多发短T_2信号病变相鉴别。

（天津市环湖医院神经放射科韩彤供稿）