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MRI相位对比电影评价中颅窝蛛网膜囊肿脑池造瘘术的疗效

Value of phase-contrast cine MRI in evaluation of cystocisternostomy for the treatment of middle cranial fossa cyst

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英文关键词: [Arachnoid cyst](#) [Cystocisternostomy](#) [Magnetic resonance imaging](#) [Phase-contrast cine](#)

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中文摘要:

目的 评价MRI相位对比电影判断中颅窝蛛网膜囊肿脑池造瘘术疗效的价值。方法 对16例中颅窝蛛网膜囊肿患儿行造瘘术前后均行MRI常规序列扫描及相位对比电影检查,定性定量评估造瘘口脑脊液(CSF)流动,测量CSF动力学指标(峰值流速、流量及流动波形)。结果 造瘘术前 16例中颅窝蛛网膜囊肿与邻近蛛网膜下腔未见沟通,经CT脑池造影进一步证实诊断。囊肿与基底池造瘘术后,16例造瘘口CSF流动均为阳性,在一个心动周期内表现为双向运动,与正常导水管流动波形相似,提示造瘘口CSF流动通畅。术后1周16例蛛网膜囊肿均较术前缩小。对其中10例分别于术后3个月及半年复查,见蛛网膜囊肿均进一步缩小。结论 MRI相位对比电影是评价囊肿脑池造瘘术治疗中颅窝蛛网膜囊肿的疗效以及术后观察造瘘口是否通畅的直观可靠的影像学手段。

英文摘要:

Objective To observe the value of phase-contrast cine MRI in cystocisternostomy for the treatment of middle cranial fossa cyst. **Methods** Sixteen patients with middle cranial fossa cysts underwent brain routine MRI and phase-contrast cine MRI pre- and post-operation. Qualitative evaluation and quantitative measurement of cerebrospinal fluid (CSF) flow through the stoma of the basal cistern were performed. The waveforms were analyzed for the maximum flow velocity, flow volume and the change of the pre- and post-operation patterns. **Results** Pre-operation phase-contrast cine MRI showed no communication with the adjacent subarachnoid space, and the cysts in all 16 patients were diagnosed as non-communicating arachnoid cysts. CSF in the stoma of the basal cistern had two directions that flowed downward during the systolic period and flowed upward during the diastolic period of the cardiac cycle after operation, which suggesting the patency of the stoma. One week after operation, the volume of arachnoid cysts reduced comparing with pre-operation in 16 patients. During following up of 10 patients, the volume of cysts reduced further 3 months and 6 months after operation. **Conclusion** Phase-contrast cine MRI of middle cranial fossa cyst in children undergoing cystocisternostomy can provide intuitive and reliable evidences for the effective evaluation on the patency of the stoma.

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