

. 论 著 .

脑积水对听神经瘤显微手术治疗效果的影响

刘 宁 姚国杰 陈大瑜

【摘要】目的 探讨脑积水对听神经瘤显微手术治疗效果的影响。**方法** 回顾性分析 2018~2019 年乙状窦后入路手术治疗的 41 例听神经瘤的临床资料,其中 9 例合并脑积水。根据肿瘤最大径平均值分为大型听神经瘤(≥ 34 mm, 20 例)和小型听神经瘤(< 34 mm, 21 例)。**结果** 肿瘤全切除 30 例;次全切除 11 例。术后继发颅内出血 12 例、皮下积液 4 例、脑干或颅神经损伤 7 例,脑积水加重 9 例。出院时,预后良好(GOS 评分 4~5 分)36 例。术前合并脑积水病人术后继发出血发生率(77.7%, 7/9)明显高于术前无脑积水病人(15.6%, 5/32; $P < 0.05$),而两者预后良好率无统计学差异(88.9% vs. 87.5%; $P > 0.05$)。大型听神经瘤术后继发出血发生率(60.0%, 12/20)明显高于小型听神经瘤(0%; $P < 0.05$)。大型听神经瘤 20 例中,术前合并脑积水病人术后继发出血发生率(100.0%, 7/7)明显高于无脑积水病人(38.5%, 5/13; $P < 0.05$)。**结论** 脑积水不是听神经瘤预后的决定性影响因素,但脑积水与术后出血有关,因此,术中应制定相应的策略以减少术后出血。

【关键词】 听神经瘤;脑积水;显微手术;疗效

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Effect of hydrocephalus on microsurgical outcomes of vestibular schwannomas

LIU Ning, YAO Guo-jie, CHEN Da-yu. Department of Neurosurgery, General Hospital of Central Theater Command, PLA, Wuhan 430070, China

【Abstract】 Objective To investigate the effect of hydrocephalus on surgical outcomes of patients with vestibular schwannoma (VS). **Methods** The clinical data of 41 patients with VS who underwent microsurgery through retrosigmoid approach from 2018 to 2019 were retrospectively analyzed. Nine patients were complicated with hydrocephalus. The tumors were divided into large VSs (≥ 34 mm, 20 patients) and small VSs (< 34 mm, 21 patients) according to the mean maximum diameter of tumors. **Results** Total tumor resection was achieved in 30 patients, and subtotal in 11. Postoperative intracranial bleeding occurred in 12 patients, subcutaneous effusion in 4, brain stem or cranial nerve injury in 7, and hydrocephalus aggravation in 9. On discharge, 36 patients had good prognosis (GOS score of 4~5). The incidence of postoperative bleeding in the patients with preoperative hydrocephalus (77.7%, 7/9) was significantly higher than that in the patients without preoperative hydrocephalus (15.6%, 5/32; $P < 0.05$), but there was no significant difference in the good prognosis rate between the two groups (88.9% vs. 87.5%; $P > 0.05$). The incidence of postoperative bleeding in large VSs group (60.0%, 12/20) was significantly higher than that in small VSs group (0%; $P < 0.05$). In 20 patients with large VSs, the incidence of postoperative bleeding in the patients with preoperative hydrocephalus (100.0%, 7/7) was significantly higher than that in the patients without hydrocephalus (38.5%, 5/13; $P < 0.05$). **Conclusions** Hydrocephalus is not a decisive prognostic factor for the patients with VS, but it is associated with postoperative intracranial bleeding. Therefore, appropriate strategies should be adopted to reduce postoperative bleeding.

【Key words】 Vestibular schwannomas; Retrosigmoid approach; Microsurgery; Hydrocephalus

听神经瘤约占颅内肿瘤的 6%,占桥脑小脑角肿瘤的 80%^[1]。随着显微手术技术的进步以及术中电生理监测的应用,听神经瘤病死率显著下降,由 20 世纪 80 年代的 10%~20%降低到现在的不足 1%^[2]。听神经瘤常并发脑积水,发生率在 3.7%~42%^[3],增加手术难度,而脑积水可能长期存在,甚至在术后进展^[4]。2018~2019 年手术治疗听神经瘤 41 例,其中 9 例

合并脑积水,现报道如下。

1 资料和方法

1.1 一般资料 41 例中,男 19 例,女 22 例;年龄 27~71 岁,平均(51.9±11.4)岁;病程 5 d~11 年。复发性听神经瘤 2 例,神经纤维瘤病 II 型 1 例。

1.2 临床表现 听力下降 31 例,行走不稳 15 例,三叉神经痛 2 例,面部麻木 10 例,饮水呛咳 1 例,咽部疼痛伴咽反射减退 1 例,头痛、头昏 3 例,颅内压增高表现 3 例。

1.3 影像学检查 术前均行 CT、MRI 平扫及增强检查。肿瘤多呈球形或橄榄型,实性或囊实性,部分肿

瘤呈不均匀分叶,多呈不均匀强化。合并脑积水 9 例。肿瘤最大径 11~60 mm,平均(33.2±11.3)mm,其中大型听神经瘤 20 例(≥34 mm),小型听神经瘤 21 例(<34 mm)。

1.4 手术方法 41 例均采用乙状窦后入路手术,5 例术前行腰大池置管引流术,1 例术中行枕角穿刺外引流术,2 例术前行侧脑室额角穿刺置管引流术。

2 结果

2.1 手术结果 肿瘤全切除 30 例;次全切除 11 例(内听道或脑干侧少量存留),术后辅以伽玛刀治疗。术后继发颅内出血 12 例、皮下积液 4 例、脑干或颅神经损伤 7 例,脑积水加重 9 例。出院时,预后良好 36 例(GOS 评分 4~5 分)。

2.2 脑积水、肿瘤大小与术后继发出血的关系 术前合并脑积水病人术后继发出血发生率(77.7%, 7/9)明显高于术前无脑积水病人(15.6%, 5/32; $P<0.05$)。而两者预后良好率无统计学差异(88.9% vs. 87.5%; $P>0.05$)。

大型听神经瘤术后继发出血发生率(60.0%, 12/20)明显高于小型听神经瘤(0%; $P<0.05$)。

大型听神经瘤 20 例中,术前合并脑积水 7 例,无脑积水 13 例。术前合并脑积水病人术后继发出血发生率(100.0%, 7/7)明显高于无脑积水病人(38.5%, 5/13; $P<0.05$)。

3 讨论

听神经瘤合并脑积水的治疗,曾一度被认为需要术前行脑室-腹腔分流术,以减少因脑积水导致的脑组织张力增高,给听神经瘤手术带来的不利影响。但是,近年来,越来越多的学者认为,合并脑积水并未导致听神经瘤手术治疗预后的差异。因此,并不推荐分流术作为这一类病人手术治疗的优先策略^[5-8]。相反,大样本病例分析认为,单纯肿瘤切除术,在去除第四脑室脑脊液流出道或基底池脑脊液循环通路阻塞因素,以及终止肿瘤分泌功能导致脑脊液吸收障碍等因素,可以在术后一段时间内使脑积水缓解,无需行分流术^[5-8]。本文术后继发脑积水或脑积水影像表现较术前进展的病人,术后 2 个月至 1 年随访显示,脑积水缓解,未行永久分流术。

临床上,合并脑积水的听神经瘤术后继发出血情况较为多见。原因可能是这一类合并脑积水的病人,往往肿瘤体积过大。听神经瘤合并脑积水的原因包括:肿瘤阻塞脑脊液循环通路以及肿瘤导致脑

脊液蛋白含量改变^[5]。本文 9 例合并脑积水病人中,7 例肿瘤体积过大,导致脑脊液循环通路受阻。

本文对肿瘤最大径≥34 mm 病人进行分析发现,因为肿瘤形态差异,对桥脑小脑角中心区域(第四脑室侧壁)的压迫,是导致继发不完全梗阻性脑积水的原因。这一形态特点,使乙状窦后入路切除术中,在对中心区域的肿瘤切除时,容易出现止血盲区。同时,在暴露这一区域时,如增加对小脑半球的侧方牵拉,也容易导致术后继发出血。

总之,脑积水并不是听神经瘤病人预后的决定性影响因素,但与术后出血有关,因此术中应制定相应的策略以减少术后出血。

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