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论著

显微经蝶窦入路切除垂体腺瘤术中垂体功能保护技术探讨

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摘要：

目的：探讨垂体腺瘤经蝶窦手术中垂体柄和垂体组织的辨认与保护，以进一步改善垂体腺瘤的手术疗效。
方法：中南大学湘雅医院神经外科2010年10月至2012年9月单鼻孔经鼻腔蝶窦入路显微手术切除肿瘤并经病理确诊
的51例垂体腺瘤，通过术前影像学资料和术中显微解剖，仔细辨认正常腺垂体、垂体柄、神经垂体与病变组织的关系，尽可能切除垂体腺瘤组织，达到垂体功能的保护及减少术后并发症。结果：37例(72.5%，37/51)肿瘤全切除，12
例(23.5%，12/51)肿瘤次全切除，2例(3.9%，2/51)肿瘤大部分切除。术中对正常垂体组织及垂体柄均予以完整保留。
激素测定示手术对游离三碘甲状腺原氨酸(free triiodothyronine，FT3)，促肾上腺皮质激素(adrenocorticotropic hormone，ACTH)的影响小，而对于游离四碘甲状腺原氨酸(free tetraiodothyronine，FT4)，促甲状腺激素(thyroid stimulating hormone，TSH)术后及随访的结果则均有明显的改善。男性睾酮测定值术前术后无明显变化(以
上结果均在无激素替代治疗作用下测定)。术后并发症主要有：尿崩患者5例(9.8%，5/51)，无永久性尿崩；电解质紊
乱(主要指低钠血症)患者17例(33.3%，17/51)；术后脑脊液鼻漏和颅内感染患者各1例(2.0%，1/51)无围手术期死亡患者。
结论：显微经蝶窦手术可以实现垂体腺瘤(包括侵犯到海绵窦内肿瘤)的有效切除；显微经蝶窦手术中术者应对正常垂体、垂体柄及病变组织等准确辨识，这样才能达到保留和恢复垂体功能的治疗目标。

关键词： 垂体腺瘤 显微经蝶窦手术 垂体功能 并发症

Preservation of the pituitary stalk and the gland in ranssphenoidal microsurgery for pituitary adenomas

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Abstract:

Objective: To improve the surgical outcome of pituitary adenomas by identifying and preserving the pituitary stalk and the gland during surgery.
Methods: From October 2010 to September 2012, the author from the Department of Neurosurgery of Xiangya Hospital, Central South University operated on 51 patients with pituitaryadenoma. During the operations, we carefully identified the normal adenohypophysis, pituitary stalk,
neurohypophysis and the abnormal tissues either by direct observation or by medical images, aiming to excise the tumor thoroughly, protect the pituitary function and reduce the postoperative complications.
Results: Totally 37 patients (72.5%, 37/51) had total resection of the tumor, 12 (23.5%, 12/51) had subtotal tumor resection and the other 2 had major removal. The gland and the pituitary stalk were well identified and reserved. Detection of hormone content proved that the operation had little effect on the free triiodothyronine (FT3) and adrenocorticotropic hormone (ACTH), while for free tetraiodothyronine (FT4) and thyroid stimulating hormone (TSH) and postoperative followup significant alleviation was found. There was no significant fluctuation for the testosterone in the men preoperatively and postoperatively (all the above results were obtained without hormone replacement therapy). The main postoperative complications were as follows: temporary diabetes insipidus in 5 patients (9.8%, 5/51); electrolyte disorder (the appearance of hyponatremia) in 17 (33.3%, 17/51); and cerebrospinal fluid rhinorrhea and postoperative intracranial infection in 1 (2%, 1/51). No one died during the perioperation period.
Conclusion: Microscopic transsphenoidal surgery is effective for pituitary adenomas including tumors violating the cavernous sinus. Accurate identification of the pituitary stalk, the gland and the

abnormal tissue during the microscopic transsphenoidal operation plays a critical role in preserving the pituitary function and promoting postoperative rehabilitation.

Keywords: pituitary adenomas transsphenoidal microsurgery pituitary function complication

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参考文献：

1. Mortini P, Barzaghi R, Losa M, et al. Surgical treatment of giant pituitary adenomas: strategies and results in a series of 95 consecutive patients
[J]. Neurosurgery, 2007,60(6): 993-1002; discussion 1003-1004.
2. Gondim JA, Almeida JP, Albuquerque LA, et al. Endoscopic endonasal approach for pituitary adenoma: surgical complications in 301 patients
[J]. Pituitary, 2011,14(2): 174-183.
3. Shou XF, Li SQ, Wang YF, et al. Treatment of pituitary adenomas with a transsphenoidal approach
[J]. Neurosurgery, 2005, 56(2): 249-256; discussion 249-256.
4. Knosp E, Steiner E, Kitz K, et al. Pituitary adenomas with invasion of the cavernous sinus space: a magnetic resonance imaging classication compared with surgical ndings
[J]. Neurosurgery, 1993, 33(4): 610-617; discussion 617-618.
5. Coier JP, Destrieux C, Brunereau L, et al. Cavernous sinus invasion by pituitary adenoma: MR imaging
[J]. Radiology, 2000, 215(2): 463-469.
6. Youssef AS, Agazzi S, van Loveren HR. Transcranial surgery for pituitary adenomas
[J]. Neurosurgery, 2005, 57(1 Suppl): 168-175; discussion 168-175.
7. Jane JA Jr, Thapar K , Kaptain GJ, et al. Pituitar y surger y: transsphenoidal approach
[J]. Neurosurgery, 2002,51(2): 435-442; discussion 442-444.

本刊中的类似文章

1．文路； 陈凌； 刘运生；.碱性成纤维细胞生长因子与垂体腺瘤增殖及侵袭能力的关系[J]. 中南大学学报(医学版), 2001,26(5): 466-
2．晋丽平； 王晨虹； 陈建林；.妊娠高血压综合征患者血浆von Willebrand因子与一氧化氮水平的变化[J]. 中南大学学报(医学版), 2001,26(5): 477-
3．席兴华； 黄顺清； .基层医院开展突击性大规模白内障复明手术并发症的防治[J]. 中南大学学报(医学版), 2001,26(6): 556-
4．张明奎； 胡建国； 杨进福； 尹邦良；.大鼠异位心脏移植术的改进及并发症原因分析[J]. 中南大学学报(医学

版), 2003,28(2): 194-
5. 刘志雄1， 刘运生1， 方文华1， 陈委1， 李萃2， 肖志强2.侵袭性与非侵袭性垂体腺瘤的蛋白质差异表达谱的建立[J]. 中南大学学报(医学版), 2009,34(07): 569-575
6. 马志明， 仇斌， 侯永宏， 刘运生， 经鼻蝶窦入路切除垂体腺瘤[J]. 中南大学学报(医学版), 2006,31(02): 281-283
7. 谢秀梅 杨志伟 陈美芳. 基于沙乳系统的伽玛刀治疗[J]. 中南大学学报(医学版), 2006,31(05): 714-716
8. 刘志雄1， 刘运生1， 方文华1， 陈委1， 李萃2， 肖志强2.侵袭性与非侵袭性垂体腺瘤的蛋白质差异表达谱的建立[J]. 中南大学学报(医学版), 2009,34(07): 569-575
9. 霍雷1， 毕长龙2， 方加胜1， 王延金1， 张明宇1， 陈风华1.成人第四脑室肿瘤的显微手术治疗和术后并发症的防治[J]. 中南大学学报(医学版), 2009,34(07): 642-645
10. 邓幼文1， 周义家2， 吕国华1， 王冰1， 李晶1， 康意军1， 卢畅1， 刘伟东1， 马泽民1.椎弓根螺钉技术治疗胸椎脊柱侧凸并发症分析[J]. 中南大学学报(医学版), 2009,34(08): 820-824
11. 张帅， 刘勇， 唐瑶云， 张俊毅， 肖健云.鼻内镜下儿童腺样体切除术的并发症及其预防[J]. 中南大学学报(医学版), 2009,34(08): 834-836
12. 吴鲁卿， 张春芳， 张恒， 李卿， 陈胜喜.210例肺癌全肺切除临床分析[J]. 中南大学学报(医学版), 2008,33(03): 270-273
13. 刘文亮， 喻风雷， 尹邦良.电视胸腔镜辅助NUSS手术微创治疗漏斗胸[J]. 中南大学学报(医学版), 2008,33(05): 443-447
14. 张向梅， 丁依玲.妊娠期糖代谢异常患者糖化血红蛋白测定的临床意义[J]. 中南大学学报(医学版), 2008,33(01): 85-88
15. 符晓， 朱笑萍， 吴鸿， 袁芳， 陈星.经颈外静脉留置导管在血液透析患者中的应用[J]. 中南大学学报(医学版), 2008,33(11): 1056-1059