

· 临床研究 ·

标准外伤大骨瓣开颅术对重型颅脑损伤的疗效分析*

李传友¹, 毛青²

(1. 河南省新乡市中心医院神经外一科 453000;

2. 上海交通大学医学院附属仁济医院神经外科 200127)

摘要:目的 探讨标准外伤大骨瓣开颅术在重型颅脑损伤的临床应用价值。方法 选择 2008 年 6 月至 2011 年 6 月该院 112 例重型颅脑损伤患者,采用常规骨瓣开颅减压术的患者为对照组($n=56$),采用美国标准标准外伤大骨瓣开颅术的患者为治疗组($n=56$),比较两组手术治疗后的临床疗效。结果 治疗组共 10 例发生并发症,发生率为 17.86%;对照组共 24 例发生并发症,发生率为 42.86%。两组间差异有统计学意义($P<0.01$)。治疗组手术后良好 31 例,轻残 11 例,重残 5 例,植物生存 2 例,死亡 7 例;对照组手术后良好 13 例,轻残 19 例,重残 9 例,植物生存 5 例,死亡 10 例;两组临床疗效比较,差异有统计学意义($P<0.05$)。治疗组术后第 3 天、术后第 7 天的颅内压与对照组相比,差异均有统计学意义($P<0.05$)。结论 标准外伤大骨瓣开颅术治疗重型颅脑损伤具有较好的临床疗效,且不良反应少、减压充分,值得临床推广运用。

关键词:颅脑损伤;标准外伤大骨瓣开颅术;疗效

doi:10.3969/j.issn.1671-8348.2013.19.008

文献标识码:A

文章编号:1671-8348(2013)19-2206-02

Efficacy of standard large trauma craniotomy on severe traumatic brain injury*

Li Chuanyou¹, Mao Qing²

(1. First Department of Neurosurgery, Xinxiang Central Hospital, Xinxiang, Henan 453000, China; 2. Department of Neurosurgery, Renji Hospital Affiliated to Shanghai Jiaotong Medical University, Shanghai 200127, China)

Abstract: Objective To investigate the clinical value of standard large trauma craniotomy in severe traumatic brain injury. Methods A total of 112 cases of severe head injury patients in our hospital from June 2008 to June 2011 were chosen as object for study, and were randomly divided into two groups, the control group ($n=56$) underwent conventional craniotomy decompression, the treatment group ($n=56$) underwent American standard of large trauma craniotomy, surgical treatment and clinical efficacy in two groups were compared. Results In the treatment group, a total of 10 cases were with complications, the occurrence rate was 17.86%; in the control group, total 24 patients had complications, the occurrence rate was 42.86%. The result of complication rate in two groups showed significant difference ($P<0.05$). 31 cases had good result post-operative treatment in the treatment group, 11 cases were mild disability, 5 cases were severe disability, two cases were vegetable being, 7 cases died; while 13 cases had good result in the control group after surgery, 19 cases were mild disability, 9 cases were severe disability, 5 cases were vegetable being and 10 cases died; clinical efficacy by comparing the difference was statistically significant ($P<0.05$). After 3, 7 days, comparing the intracranial pressure between the control group and the treatment group, the difference was statistically significant ($P<0.05$). Conclusion The standard large trauma craniotomy for treatment of severe traumatic brain injury has better clinical efficacy and fewer adverse reactions, full decompression, worthy of clinical use.

Key words: craniocerebral trauma; standard large trauma craniotomy surgery; efficacy

颅脑损伤是常见的一种外伤性疾病,约 20% 为重型颅脑损伤^[1]。重型颅脑损伤在临床上具有较高的致残率与病死率,临床对其的治疗以控制颅内压及预防并发症为主^[2]。标准外伤大骨瓣开颅术不仅操作简单,且能有效降低颅内压。为了探讨标准外伤大骨瓣开颅术治疗重型颅脑损伤的临床疗效,本研究选择本院 112 例重型颅脑损伤患者进行分析,现将结果报道如下。

1 资料与方法

1.1 一般资料 选择 2008 年 6 月至 2011 年 6 月本院就诊的重型颅脑损伤患者 112 例,所有入选患者均有明确的外伤史,有开颅减压手术指征,GCS 评分小于或等于 8 分,排除既往有

脑肿瘤、高血压病、可疑脑血管病、凝血功能异常及多系统衰竭的患者。采用常规骨瓣开颅减压术的患者为对照组($n=56$),采用美国标准标准外伤大骨瓣开颅术的患者为治疗组($n=56$),比较两组手术治疗后的临床疗效。两组患者一般资料比较,差异无统计学意义($P>0.05$),具有可比性。

1.2 方法 治疗组采用美国标准标准外伤大骨瓣开颅术,从颞弓上耳屏前方 1 cm 处起行手术切口,在耳廓上方沿发迹向后延伸到顶骨正中线,沿正中线向前止于前额发际处^[3]。在裸露的颅骨上钻孔 5 枚以上,作大型游离骨瓣,顶部骨瓣旁开正中中线 2~3 cm,骨窗前至额极,后达乳突,上近矢状窦旁,下至颞弓水平,尽可能咬除蝶骨嵴外 1/3,显露蝶骨平台与颞窝,骨

* 基金项目:国家自然科学基金资助项目(81071542)。 作者简介:李传友(1971~),主治医师,硕士,主要从事重型颅脑损伤治疗的临床研究工作。

表 1 两组并发症及临床疗效比较[n(%),n=56]

组别	并发症				临床疗效				
	脑积液	外伤性癫痫	外伤性脑梗死	脑切口疝	良好	轻残	重残	植物生存	死亡
治疗组	3(5.36)	6(10.71)	1(1.79)	1(1.79)	31(55.36)	11(19.64)	5(8.93)	2(3.57)	7(12.50)
对照组	8(14.29)	11(19.64)	5(8.93)	2(3.57)	13(23.21)	19(33.93)	9(16.07)	5(8.93)	10(17.86)
χ^2	9.081				12.455				
P	<0.01				<0.05				

窗成 12 cm×15 cm 大小^[4]。放射状切开额颞顶部硬膜,根据其损伤情况予以不同手术方法将坏死脑组织、脑内血肿及额颞急性硬膜下水肿清除。放置引流管,弃去骨瓣,严密缝合颞肌与头皮。对照组采用常规骨瓣开颅减压术,全麻后根据血肿部位,采用单侧或双侧颞顶瓣或额颞瓣开颅减压术,去除骨瓣 6 cm×8 cm,硬脑膜扩大减张缝合。

1.3 统计学处理 采用 SPSS17.0 统计软件,计量资料组间比较采用 t 检验,计数资料组间比较采用 χ^2 检验,以 $P<0.05$ 为差异有统计学意义。

2 结 果

2.1 两组并发症及临床疗效比较 治疗组共 10 例发生并发症,发生率为 17.86%;对照组共 24 例发生并发症,发生率为 42.86。治疗组并发症发生率与对照组相比,差异明显有统计学意义($P<0.01$)。按照 GOS 标准,治疗组手术后良好 31 例,轻残 11 例,重残 5 例,植物生存 2 例,死亡 7 例;对照组手术后良好 13 例,轻残 19 例,重残 9 例,植物生存 5 例,死亡 10 例;两组临床疗效经比较,差异有统计学意义($P<0.05$)。见表 1。

2.2 两组术后颅内压比较 治疗组术后第 3、7 天的颅内压与对照组相比,差异均有统计学意义($P<0.05$),见表 2。

表 2 两组术后颅内压比较($\bar{x}\pm s$,mm Hg)

组别	n	术后第 3 天	术后第 7 天
治疗组	56	21.79±2.83	17.52±2.24
对照组	56	27.58±3.19	23.36±2.85
t		13.583	15.334

3 讨 论

重型颅脑损伤在临床上具有较高的致残率、病死率,且具有较高的发病率。目前,临床上对其多予以常规骨瓣开颅减压术治疗,但因颅底暴露不够,区域性开颅骨窗范围有限,致使不能将坏死脑组织完全清除,也达不到止血的最终目的。标准外伤大骨瓣开颅术是由 Becker 教授提出,主要用于治疗单侧急性幕上颅内血肿与脑挫裂伤^[5]。宋颺^[6]在标准外伤大骨瓣开颅术治疗重型颅脑损伤 45 例临床分析研究中表明,对重型颅脑损伤患者采用标准外伤大骨瓣开颅术,尽早清除颅内血肿,大骨瓣减压,直视下脑疝复位可显著改善患者的预后。标准外伤大骨瓣开颅术是治疗重型颅脑损伤合并严重脑挫裂伤、大面积脑水肿颅内高压患者的一种有效的手术方式。

标准外伤大骨瓣开颅术与常规骨瓣开颅减压术相比具有以下优点:切口设计合理、暴露范围广;手术入路固定、操作简单;骨窗位置低、减压充分;利于脑疝复位;促进血液回流、缓解脑血管痉挛;可根据术中情况行去骨瓣减压或保留骨瓣;手术

切口在发际内,不影响美观^[7-10]。在对患者予以标准外伤大骨瓣开颅术时还需注意以下几点:手术切口切勿太低,需与颞弓平面,保护面神经额支;对合并急性硬膜下水肿且形成脑疝者,需在额部行 3 cm 切口,待颅骨钻孔后将硬脑膜切开放出部分血肿,然后扩大开颅;注意保护好 Labe's 静脉与侧裂区血管^[10-15];术前脑疝时间较长、术中脑搏动差或脑膨起不明显者,需将颞叶轻抬后切开小脑幕;术中充分冲洗,术后适当将硬膜下引流管留置时间延长。本研究对本院 112 例重型颅脑损伤患者分别予以标准外伤大骨瓣开颅术与常规骨瓣开颅减压术治疗,结果前者的并发症发生率、临床疗效及术后颅内压情况均明显优于后者,差异均有统计学意义($P<0.05$)。

综上所述,标准外伤大骨瓣开颅术治疗重型颅脑损伤具有减压充分、暴露广泛、并发症少及疗效好等特点,能明显改善患者预后,提高患者的生活质量,值得临床推广与运用。

参考文献:

[1] 王锋,李春国.标准外伤大骨瓣开颅术治疗重型颅脑损伤体会[J].现代中西医结合杂志,2009,18(21):2567-2568.
 [2] 左春生,谭永康,施小龙,等.标准外伤大骨瓣开颅术治疗重型颅脑损伤 32 例分析[J].安徽医药,2011,15(6):744-745.
 [3] 陈小军,黄军.标准外伤大骨瓣与常规骨瓣开颅术治疗重型颅脑损伤的对照研究[J].中国现代医学杂志,2010,20(19):2972-2974,2977.
 [4] 李军.标准外伤大骨瓣开颅术治疗重型颅脑损伤的临床效果分析[J].临床合理用药杂志,2009,2(15):91-92.
 [5] 刘洪生,谢延风.47 例重型颅脑损伤标准外伤大骨瓣开颅术的临床体会[J].重庆医学,2011,40(18):1781-1782.
 [6] 宋颺.标准外伤大骨瓣开颅术治疗重型颅脑损伤 45 例临床分析[J].神经疾病与精神卫生,2010,10(2):171-172.
 [7] 刘万荣,魏忠,方有利,等.标准化外伤大骨瓣开颅术救治重型颅脑损伤临床体会[J].安徽医学,2010,31(12):1479-1480.
 [8] 王忠,苏宁,吴日乐,等.应用标准外伤大骨瓣减压术治疗重型颅脑损伤 198 例分析[C].中国医师协会神经外科医师分会第六届全国代表大会论文集,2011:249-250.
 [9] Kim MH,Hwang JW,Jeon YT,et al.Effects of valproic acid and magnesium sulphate on rocuronium requirement in patients undergoing craniotomy for cerebrovascular surgery[J].Br J Anaesth,2012,109(3):407-412.
 [10] Tan C,Ries CR,Mayson K,et al.Indication for surgery and the risk of postoperative nausea and(下转第 2211 页)

参考文献:

- [1] 许官学,石蓓,王正龙,等.多支冠脉血管病变分次 PCI 的近期临床疗效[J].遵义医学院学报,2009,50(6):580-582.
- [2] Ribichini F, Taggart D. Implications of new ESC/EACTS guidelines on myocardial revascularization for patients with multivessel coronary artery disease[J]. *Eur J Cardiothorac Surg*, 2011, 39(5):619-622.
- [3] 郭永和,周玉杰,赵迎新,等.不完全血运重建策略对老年冠状动脉多支血管病变患者预后的影响[J].中国介入心脏病学杂志,2012,21(1):9-11.
- [4] 中华医学会心血管病学分会,中华心血管病杂志编辑委员会.经皮冠状动脉介入治疗指南(2009)[J].中华心血管病杂志,2009,37(1):4-25.
- [5] Braunwald E, Antman EM, Beasley JW, et al. ACC/AHA 2002 guideline update for the management of patients with unstable angina and non-ST-segment elevation myocardial infarction summary article; a report of the American College of Cardiology/ American Heart Association task force on practice guidelines[J]. *JACC*, 2002, 40(7):1366.
- [6] Park DW, Kim YH, et al. Long-term outcome of stents versus bypass surgery in diabetic and nondiabetic patients with multivessel or left main coronary artery disease: a pooled analysis of 5775 individual patient data[J]. *Circ Cardiovasc Interv*, 2012, 5(4):467-475.
- [7] Chang TI, Shilane D, Kazi DS, et al. Multivessel coronary artery bypass grafting versus percutaneous coronary intervention in ESRD[J]. *J Am Soc Nephrol*, 2012, 23(12):2042-2049.
- [8] Gao F, Zhou YJ, Shen H, et al. Meta-analysis of percutaneous coronary intervention versus coronary artery bypass graft surgery in patients with diabetes and left main and/or multivessel coronary artery disease[J]. *Acta Diabetol*, 2012, 21:1.
- [9] Vasaiwala S, Williams DO. Revascularization for left main and multivessel coronary artery disease in the drug-eluting stent era; integration of recent drug-eluting stent trials[J]. *Curr Cardiol Rep*, 2012, 14(4):468-476.
- [10] 陈剑飞,张藜,黄岚.从 SYNTAX 研究评价多支血管病变血运重建的意义[J].心血管病学进展,2010,31(5):703-705.
- [11] 张新勇,马长生.药物洗脱支架时代多支血管病变血运重建的临床试验评价[J].中国介入心脏病学杂志,2009,17(1):48-50.
- [12] Farkouh ME, Domanski M, Sleeper LA, et al. Strategies for multivessel revascularization in patients with diabetes[J]. *N Engl J Med*, 2012, 367(25):2375-2384.
- [13] Flather M, Rhee JW, et al. The effect of age on outcomes of coronary artery bypass surgery compared with balloon angioplasty or bare-metal stent implantation among patients with multivessel coronary disease; a collaborative analysis of individual patient data from 10 randomized trials[J]. *J Am Coll Cardiol*, 2012, 60(21):2150-2157.
- [14] Cuculi F, Banning AP, et al. Outcomes in patients undergoing multivessel percutaneous coronary intervention using sirolimus-eluting stents; a report from the e-SELECT registry[J]. *Euro Intervention*, 2011, 7(8):962-968.

(收稿日期:2012-11-08 修回日期:2013-03-18)

(上接第 2207 页)

- vomiting after craniotomy: a case-control study[J]. *J Neurosurg Anesthesiol*, 2012, 24(4):325-330.
- [11] Sacko O, Lauwers-Cances V, Brauge D, et al. Awake craniotomy vs surgery under general anesthesia for resection of supratentorial lesions[J]. *Neurosurgery*, 2011, 68(5):1192-1199.
- [12] Nagasaka T, Tsugeno M, Ikeda H, et al. Early recovery and better evacuation rate in neuroendoscopic surgery for spontaneous intracerebral hemorrhage using a multifunctional cannula; preliminary study in comparison with craniotomy[J]. *J Stroke Cerebrovasc Dis*, 2011, 20(3):208-213.
- [13] Rhondali O, Genty C, Halle C, et al. Do patients still re-
- quire admission to an intensive care unit after elective craniotomy for brain surgery[J]. *J Neurosurg Anesthesiol*, 2011, 23(2):118-123.
- [14] Arlt F, Trantakis C, Krupp W, et al. Cerebrospinal fluid leak after microsurgical surgery in vestibular schwannomas via retrosigmoidal craniotomy[J]. *Neurol Res*, 2011, 33(9):947-952.
- [15] Yoshimitsu K, Suzuki T, Muragaki Y, et al. Development of modified intraoperative examination monitor for awake surgery (IEMAS) system for awake craniotomy during brain tumor resection[J]. *Conf Proc IEEE Eng Med Biol Soc*, 2010, 2010:6050-6053.

(收稿日期:2013-01-08 修回日期:2013-03-21)