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小骨窗微创手术治疗高血压基底节脑出血的临床疗效 *

李亚捷 王 磊 谷 震 陈昱云 戴成国

（云南省第二人民医院神经外科 云南 昆明 650021）

摘要 目的:研究小骨窗微创手术治疗高血压基底节脑出血的临床疗效。**方法:**选取 2015 年 9 月至 2016 年 8 月云南省第二人民医院收治 76 例高血压脑出血患者,根据患者入院顺序分为观察组和对照组,每组 38 例。观察组接受小骨窗微创手术,对照组接受传统开颅手术。比较两组患者手术情况,神经功能情况,并发症。**结果:**观察组术中出血量、手术时间、平均住院时间显著少于对照组(P<0.05),两组患者血肿清除率、二次手术率比较无显著差异(P>0.05)。两组日常生活活动能力(ADL)分级比较差异具有统计学意义(P<0.05)。两组患者癫痫、颅内再出血、颅内感染比较无显著差异(P>0.05),观察组的肺部感染、消化道出血率低于对照组(P<0.05)。**结论:**高血压基底节脑出血患者应用小骨窗微创手术,能有效减少术中出血量,缩短手术时间、平均住院时间,血肿清除效果较好,能促进患者神经功能恢复,且颅内感染率较低。

关键词:小骨窗微创手术;高血压;基底节脑出血;临床疗效

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Clinical Efficacy of Small Bone Window Minimally Invasive Surgery on Basal Ganglia Hemorrhage in Hypertension*

LI Ya-jie, WANG Lei, GU Zhen, CHEN Yu-yun, DAI Cheng-guo

(Department of Neurosurgery, The Second People's Hospital of Yunnan, Kunming, Yunnan, 650021, China)

ABSTRACT Objective: To study the clinical efficacy of small bone window minimally invasive surgery on basal ganglia hemorrhage in hypertension. **Methods:** A total of 76 patients with hypertensive intracerebral hemorrhage, who were admitted to the Second People's Hospital of Yunnan from September 2015 to August 2016,were selected and divided into observation group (n=38) and control group (n=38) according to the order of admission. The observation group was given small bone window minimally invasive surgery, while the control group, traditional craniotomy. The operation conditions, neurological function, complications were compared between the two groups. **Results:** The intraoperative blood loss, operation time and average hospitalization time in the observation group were significantly less than those in the control group (P<0.05). There were no significant differences in the rate of hematoma clearance and secondary operation rate between the two groups (P>0.05). There was significant difference in the activities of daily living (ADL) classification between the two groups (P<0.05). There were no significant differences in epilepsy, intracranial rebleeding and intracranial infection between the two groups (P>0.05). The rates of lung infection and digestive tract hemorrhage in the observation group were significantly lower than those in the control group (P<0.05). **Conclusion:** The use of small bone window minimally invasive surgery in the patients with basal ganglia hemorrhage can effectively reduce intraoperative blood loss, shorten the operation time and average hospitalization time, and hematoma removal effect is better, which can promote the recovery of neurological function, and the rate of intracranial infection is lower.

Key words: Small bone window minimally invasive surgery; Hypertension; Basal ganglia hemorrhage; Clinical efficacy

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前言

高血压脑出血也被称之为出血性脑卒中或脑溢血,发病人群以 50~60 岁为主,是高血压病最为严重的一种并发症,出血和血肿的颅内占位效应给脑血管及周围脑组织造成损伤,进而出现一系列的病理变化,增加患者致残、致死风险[1-3]。在高血压脑出血患者中尽早开展手术治疗发挥着极其重要的作用,相关研究者提出在高血压性脑出血中开展外科治疗,其疗效较为确切,但脑干血肿和深部血肿中开展手术治疗,其效果较差[4,5]。目前,在高血压脑出血中经合理的术式治疗能及时解除脑组织受压和清除血肿,不但能挽救生命,还能提高生存质量和降低致残率[6-8]。为临床在治疗高血压基底节脑出血提供参考,本文旨在探讨小骨窗微创手术治疗高血压基底节脑出血的临床疗效,现报道如下。

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作者简介:李亚捷(1971-),男,本科,主治医师,从事脑血管病介入治疗方面的研究,E-mail:zweieu@163.com

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1 资料与方法

1.1 临床资料

选择 2015 年 9 月至 2016 年 8 月云南省第二人民医院收治的高血压脑出血患者 76 例，纳入标准：① 通过 CT 被诊断为基底节区脑出血；② 意识状态为嗜睡 - 中度昏迷；③ 出血量 30 mL-80 mL。排除标准：① 脑疝形成者；② 因血管畸形、肿瘤、动脉瘤、外伤等导致的出血；③ 凝血功能障碍或重要脏器功能不全、难以接受手术治疗者。根据患者入院顺序分为观察组和对照组各 38 例。两组患者临床基线资料比较无统计学意义（P>0.05），见表 1。

表 1 两组患者临床资料分析[n(%)]

Table 1 Clinical data analysis of patients between two groups[n(%)]

Groups	n	Gender		Age (years old)	Time of onset to admission (h)	Hematoma volume (mL)	Bleeding site			Other complications	
		Male	Female				Internal capsule	Outside	Diabetes	Coronary heart disease	Alcohol and tobacco addiction
Observation group	38	24(63.16)	14(36.84)	67.24± 8.87	15.34± 2.75	54.21± 24.76	14(36.84)	24 (63.16)	7 (18.42)	4 (10.53)	14 (36.84)
Control group	38	25 (65.79)	13 (34.21)	67.28± 8.51	15.37± 2.81	54.27± 24.79	12 (31.58)	26 (68.42)	5 (13.16)	6 (15.79)	13 (34.21)
t/x^2		0.057		0.020	0.047	0.011	0.234		0.396	0.461	0.057
P		0.811		0.984	0.963	0.992	0.629		0.529	0.497	0.811

1.2 方法

观察组采取小骨窗微创手术治疗，在完成气管插管全身麻醉后，在耳前处找到位置后行小骨窗开颅，长度为 4~5 cm 的皮肤切口，为 3~4 cm 的骨窗直径，于硬脑膜处行 " 十 " 字切开，同时电凝止血，将颞上、中回进行充分暴露。借助显微镜电凝切开约 1 cm 的脑皮质。进入血肿腔后将血肿吸出，在血肿腔中央放置吸引器头端，防止和血肿腔壁脑组织接触。防止吸引器的吸力过大，当吸除血肿时出现少许灰白脑组织便可终止。当清除血肿后，在小血管处发生活动性出血时，应吸住血管，随之使用弱电凝进行处理；如属于渗血，需要使用止血纱布进行止血。创腔需使用生理盐水清洗直至清亮后，对于脑室内血量不多的患者，不需要开展脑室外引流；而血量较多的患者，需要开展脑室外引流。对颞肌、帽状腱膜及头皮进行逐层缝合。对照组采取传统骨瓣开颅血肿清除术，术前经 CT 扫描确认患者血肿体表投影区，全麻后根据术前 CT 影像行马蹄切口，选择相应的额颞部位进行常规开颅，放射状切开硬脑膜，避开重要血管和功能区，切开皮质约 2 cm；在直视下清除血肿，完毕后止血，常规置管引流，缝合手术切口，手术完毕。两组患者术后均密切监测心肺功能、生命体征和瞳孔变化，并给予脱水、积极防治并发症及对症支持等综合治疗。

1.3 观察指标

对两组患者的手术时间、术中出血量、平均住院时间、血肿清除率、二次手术予以分析。通过日常生活活动能力（activities of daily living, ADL）分级法[9]评价两组患者神经功能，标准如下：完全恢复至日常生活则为 I 级；能独立在住处生活或日常生活能力基本上恢复则为 II 级；需借助拐杖行走或他人协助则为 III 级；卧床不起然而意识清醒，需他人协助才能完成日常生活则为 IV 级；植物生存则为 V 级。其中 I~III 级为预后良好。分析两组患者并发症发生情况，包括癫痫、颅内再出血、颅内感染、肺部感染、消化道出血等。

1.4 统计学处理

选取 SPSS19.0 软件进行数据统计处理，用（$\bar{x}\pm s$）表示计量资料，行 t 检验，用[n(%)]表示计数资料，行 x^2 检验，用[n(%)]表示等级资料，行秩和检验，检验水准α=0.05。

2 结果

2.1 手术情况分析

术中出血量、手术时间、平均住院时间在观察组中明显少于对照组（P<0.05），两组患者血肿清除率、二次手术率比较无统计学意义（P>0.05），见表 2。

表 2 两组患者手术情况分析

Table 2 Operation analysis of patients between two groups

Groups	n	Intraoperative blood loss(mL)	Operation time (min)	Average hospitalization time(d)	Hematoma clearance rate [n(%)]		Secondary operation [n(%)]
					>90%	70%~90%	
Observation group	38	48.21± 4.76	73.53± 7.44	8.46± 0.82	31 (81.58)	7 (18.42)	2 (5.26)
Control group	38	87.54± 8.41	141.21± 12.55	17.84± 1.82	28 (73.68)	10 (26.32)	1 (2.63)
t/x^2		25.088	28.596	28.966	0.682		0.347
P		0.000	0.000	0.000	0.409		0.556

2.2 两组 ADL 分级比较

观察组和对照组的 ADL 分级比较差异具有统计学意义（P<0.05），见表 3。

表 3 两组 ADL 分级比较[n(%)]

Table 3 Comparison of ADL classification between two groups[n(%)]

Groups	n	I	II	III	IV	V
Observation group	38	14(36.84)	13(34.21)	6(15.79)	4(10.53)	1(2.63)
Control group	38	5(13.16)	4(10.53)	12(31.58)	11(28.95)	6(15.79)
u				3.887		
P				0.000		

2.3 两组患者并发症分析

两组患者癫痫、颅内再出血、颅内感染比较无统计学意义（P>0.05），观察组的肺部感染、消化道出血率低于对照组（P<0.05），见表 4。

表 4 两组患者并发症分析[n(%)]

Table 4 Analysis of complications in two groups[n(%)]

Groups	n	Epilepsy	Intracranial rebleeding	Intracranial infection	Lung infection	Digestive tract hemorrhage
Observation group	38	0(0.00)	2(5.26)	0(0.00)	1(2.63)	1(2.63)
Control group	38	1(2.63)	1(2.63)	1(2.63)	6(15.79)	6(15.79)
x^2		1.013	0.347	1.013	3.934	3.934
P		0.314	0.556	0.314	0.047	0.047

3 讨论

高血压脑出血有着较高的发病率、致残率、死亡率，发病部位以基底节区为主，此部位的发病率在高血压脑出血中占到了 2/3[10-12]。手术在高血压基底节脑出血中属于常用的治疗方式，经手术治疗能有效清除血肿，降低颅内高压，改善脑组织缺氧状态，增加脑血流量，同时能制止和预防脑血管活动性出血[13,14]。当前在治疗脑出血中较为常见的手术方式包括钻孔微创手术、开颅手术、小骨窗微创手术等[15]。尽管血肿钻孔引流术属于微创手术，操作较为简便，在各部位的脑出血中均适用，然而此术式有一定局限性，难以快速降低颅内压[16-18]。传统开颅手术能充分暴露术野，在直视下能完全清除血肿，减压迅速，效果较好，但所需的手术时间较长，创伤较大，易导致脑损伤，术后易发生肺部感染、消化道出血等并发症[19]。可见，在高血压基底节脑出血中选取合适的治疗方式显得颇为重要。

相对于传统开颅手术，在治疗高血压基底节脑出血中通过小骨窗微创手术，其优势更为明显，不但能有效清除血肿，同时能获取清晰的术野，而且可有效缓解颅内压升高，在显微镜下操作，能充分暴露血肿腔，能最大程度上降低脑组织受伤程度，止血效果较好，可促使患者神经功能快速恢复[20-22]。相关研究者在治疗高血压基底节区脑出血中通过对小骨窗微创手术和传统开颅手术的临床疗效进行对比，发现小骨窗微创手术治疗者的手术时间明显缩短，术后创伤较小，出血量较少，感染率明显降低，在显微镜直视下能获得良好的视野，防止了对血管及脑组织的牵拉，充分减压，患者在术后能更快恢复[23,24]。相关研究显示，在治疗高血压基底节区脑出血中小骨窗微创手术的术后神经功能缺损评分、有效率显著优于传统开颅血肿清除术，手术操作较为简单，副损伤较小，皮层切口小，在直视状态下完成手术，止血效果良好，因此小骨窗微创手术更加符合微创、安全的原则[25-27]。

本次研究结果显示，通过对高血压基底节区脑出血患者予以小骨窗微创手术治疗后，相对于传统开颅手术，明显减少了患者术中出血量，缩短了手术时间和平均住院时间，神经功能恢复效果优于传统开颅手术治疗者，肺部感染、消化道出血并发症的发生率显著低于传统开颅手术，同时两种手术方案均有着较高的血肿清除率，并且二次手术率较低。究其原因主要是因为小骨窗微创手术在显微镜下操作，能避免重要脑血管受损，有利于彻底止血、清除血肿，将侧裂岛叶作为入路点，通过最短路径到达血肿腔，由于此处大脑中动脉分支较为稀疏，能降低血管受损的风险性，因此，患者术后可快速恢复[28]。在开颅手术中颅内感染属于较为常见的并发症，发生率为 5%左右，在治疗颅内感染方面较为棘手，主要是因为感染部位的抗生素药物难以实现有效浓度，因此治疗效果不明显[29,30]。本次研究结果显示，通过对高血压基底节脑出血患者分别予以小骨窗微创手术和传统开颅手术治疗后，发现两种治疗方案所导致的术后颅内感染率差异不明显，发生率均较低。

总之，高血压基底节脑出血患者应用小骨窗微创手术，能有效减少术中出血量，缩短手术时间、平均住院时间，血肿清除效果较好，能促进患者神经功能恢复，且颅内感染率较低。

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