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微创腰椎后路减压融合术与传统全椎板切除术治疗 老年腰椎管狭窄的疗效对比分析

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摘要 目的:对老年腰椎管狭窄的两种治疗方式,微创腰椎后路减压融合术和传统全椎板切除术的治疗疗效进行比较,以及研究其临床应用价值。**方法:**选取 2009 年 7 月至 2013 年 1 月来我院治疗的 76 例老年腰椎管狭窄症患者,其中 43 例采用微创腰椎后路减压融合术(A 组),33 例患者接受全椎板切除手术(B 组)。对所有患者进行术后随访 6 个月~2 年,平均随访时间 1 年零 7 个月。比较分析两组的手术情况、术后不良反应发生率及 JOA 评分情况。**结果:**A 组的患者手术切口小,术中出血量少及住院时间缩短,并且较 B 组差异有统计学意义($P<0.05$);两组患者发生不良反应的情况差异无统计学意义($P>0.05$);A 组患者的 JOA 评分明显优于 B 组患者,说明 A 组疗效优于 B 组。**结论:**老年腰椎管狭窄患者采用微创腰椎后路减压融合手术方法切口小,术中出血量少,降低术后不良反应发生的风险,疗效明显,值得推广应用。

关键词:腰椎管狭窄;微创腰椎后路减压融合术;全椎板切除术;疗效比较

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Comparative Analysis on Curative Effect of Minimally Invasive Posterior Lumbar Decompression and Fusion and Traditional Total Laminectomy for Elderly Lumbar Spinal Stenosis

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ABSTRACT Objective: To compare the curative effect of minimally invasive posterior lumbar decompression and fusion and traditional total laminectomy for elderly lumbar spinal stenosis, and to study its clinical application value. **Methods:** 76 cases of elderly patients with lumbar spinal stenosis treated in hospital from July 2009 to January 2013 were selected, 43 patients were treated with minimally invasive posterior lumbar decompression and fusion (group A), 33 patients underwent the traditional total laminectomy (group B). All patients were followed up for 6 months~2 years (average 1 year and 7 months). Operation situation, the postoperative incidence of adverse reactions and JOA score of the two groups were compared and analysed. **Results:** Group A presented smaller operation incision, less bleeding and shorter hospital stay, and the differences were statistically significant compared with the group B ($P<0.05$); There was no statistically significant difference in adverse reactions between the two groups ($P>0.05$); The JOA score of group A was significantly higher than that of group B, which showed the effect of group A was better than group B. **Conclusion:** Minimally invasive posterior lumbar decompression and fusion has obvious curative effect in elderly patients with lumbar spinal stenosis for smaller operation incision, less bleeding reduce risk, and smaller risk of postoperative incidence of adverse reactions, so it is worthy of popularization and application.

Key words: Lumbar spinal stenosis; Minimally invasive posterior lumbar decompression and fusion; Total laminectomy; Efficacy comparison

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前言

随着人口老龄化,退行性腰椎管狭窄症的发生率越来越高,影响老年人的日常生活,甚至致使生活不能自理,亟待解决。腰椎管狭窄症指退行性、医源性、外伤性及软骨疾病肿瘤等

原因引起是腰椎骨与软组织发生的形态与组织结构变化,进而致使中央椎管、侧隐窝和神经孔狭窄,导致神经被压迫或受到刺激,引发一系列临床症状,临床上退行性腰椎管狭窄比较常见。目前,关于老年腰椎管狭窄患者的治疗多采取手术治疗^[1-3]。手术具有缓解严重神经压迫,减轻神经刺激症状的意义^[4-6]。然而,传统的全椎板切除术易损伤脊柱,留下腰酸背痛和继发性椎管狭窄等不良后遗症^[7-9]。本文选取本院的 76 例老年腰椎管狭窄症患者,其中 43 例采用微创腰椎后路减压融合术,33 例患

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者接受全椎板切除手术,对比分析这两种治疗方式的疗效,为临床中老年腰椎管狭窄症患者的治疗方式选取提供依据。

1 资料与方法

1.1 对象选择及一般资料

选取 2009 年 7 月至 2013 年 1 月来我院治疗的 76 例老年腰椎管狭窄症患者,39 例男性,37 例女性,年龄 54~76 岁,平均年龄(67.3 ± 7.4)岁,平均病程(2.9 ± 1.0)年。所有患者中有 83 例采用微创腰椎后路减压融合术(A 组),63 例患者接受全椎板切除手术(B 组)。76 例患者均运用椎管造影术、CT、MRI 检查,腰椎管狭窄诊断标准:X 线显示上矢径小于等于 15 mm 或 CT 结果显示椎管小于 10 mm 的患者,且存在不同程度椎间盘突出症等;临床中出现腰痛伴大小腿疼痛,腰骶部疼痛,下肢无力,脚趾麻木等体征。排除标准:多节段椎管狭窄者、有腰部手术、骨折及肿瘤的患者。两组患者在性别、年龄、病变部位、病情及病情等基线资料差异无统计学意义($P > 0.05$),具有可比性。

1.2 方法

A 组患者采用微创腰椎后路减压融合术治疗,B 组给予全椎板切除手术治疗,具体手术操作参考文献^[9]。所有患者均取俯卧位,腹部悬空,全身麻醉行气管插管。术后 2 天内拔引流管,鼓励患者术后一周下床活动。

1.3 观察指标

观察两组患者的手术情况,包括手术切口、术中出血量、手术时间及住院时间;对所有患者进行术后随访,记录术后不良反应的发生情况,比较不良发生率;运用日本矫形外科协会(JOA)评分标准(29 分法)进行疗效评价^[10],主观满分 9 分,客观满分 6 分,术前和随访共两次评分(好转率= $[(\text{评分}-\text{术前评分})/(\text{29}-\text{术前评分})] \times 100\%$),研究认为,好转率 75%以上为优,50%~74%为良,25%~49%为中,0%~24%为差。

1.4 统计学分析

采用 SPSS 17.0 统计软件进行统计分析,根据资料的类型选择适当的分析方法。计量资料采用 T 检验,以均数 $\pm$ 标准差($\bar{x} \pm s$)表示;计数资料采用卡方检验和秩和检验,以例数及百分率表示。检验水准选择 0.05。

2 结果

2.1 两组患者的手术情况

采用微创腰椎后路减压融合术治疗老年腰椎狭窄比传统全椎板切除手术治疗的手术切口长度明显减小、术中出血量明显减少($P < 0.01$)和住院时间缩短,并且差异有统计学意义($P < 0.05$);而两组手术时间之间的差异无统计学意义。见表 1。

表 1 两组患者的手术情况比较($\bar{x} \pm s$)

Table 1 Comparison of the operation situation between two groups ($\bar{x} \pm s$)

组别 Groups	手术切口长度(cm) Length of incision operation(cm)	术中出血量(ml) Amount of bleeding(ml)	手术时间(min) Operation time(min)	住院时间(d) Hospital stay(d)
A(43)	$4.4 \pm 1.3^{**}$	$251.2 \pm 50.1^{**}$	160.2 ± 31.3	$16.5 \pm 1.5^{*}$
B(33)	16.0 ± 4.8	467.5 ± 73.9	161.7 ± 34.6	17.2 ± 1.8

注:与 B 组比较,* $P < 0.05$;与 B 组比较,** $P < 0.01$ 。

Note:compared with group B,* $P < 0.05$;compared with group B,** $P < 0.01$.

2.2 两组患者术后不良反应的情况

如表 2 显示,两组老年患者均未发生内固定物松动、脱出的情况,脑脊液外漏以及神经损伤。微创腰椎后路减压融合手术患者发生 1 例切口皮缘缺血坏死、1 例硬膜囊撕裂及 1 例愈

合不良,而传统全椎板切除手术患者仅有 1 例发生愈合不良的情况。两组术后不良情况的总发生率分别为 6.98%和 6.06%,但差异无统计学意义。

表 2 两组患者术后不良反应发生情况比较(例/%)

Table 2 Comparison of the postoperative incidence of adverse reactions between two groups(n/%)

组别 Groups	内固定物松动、脱出 Loosening of internal fixation, prolapse	脑脊液外漏 Cerebrospinal fluid leakage	神经损伤 Nerve injury	切口皮缘缺血坏死 Skin flap necrosis	硬膜囊撕裂 Dural tear	愈合不良 Poor healing	总发生率(%) The total incidence rate (%)
A(43)	0	0	0	1	1	1	6.98
B(33)	0	0	0	0	1	1	6.06

2.3 两组患者接受治疗后 JOA 评分情况

两组患者治疗前的 JOA 评分情况差异无统计学意义,而术后 3 个月的 JOA 评分差异有统计学意义,并且患者采用微

创腰椎后路减压融合手术方式的 JOA 评分优于传统全椎板切除手术的患者,优良率高于 B 组。详情见表 3。

表 3 两组患者接受治疗后 JOA 评分情况比较

Table 3 Comparison of patients' JOA score between two groups after treatment

组别 Groups	优 Excellent	良 Good	中 Medium	差 Poor	优良率(%) Rate of excellent and good
治疗前 Before treatment	0	1	4	39	2.33
A(43) 治疗后 3 个月 [#] After 3 months of treatment [#]	26	14	3	0	93.02
治疗前 Before treatment	0	0	5	28	0
B(33) 治疗后 3 个月 [#] After 3 months of treatment [#]	11	13	8	1	69.67

注:与 B 组患者治疗后 3 个月比较,[#]P<0.05。

Note: compared with group B after 3 months of treatment,[#]P<0.05.

3 讨论

现如今我国人口老龄化越来越严重,加之慢性病富贵病的影响,老年腰椎管狭窄的发生率也日益升高。由于老年人缺乏运动,使得老年人腰腿疼痛的主要诱发因素是腰椎管狭窄。有研究表明,老年人可通过适当的有效的运动避免出现腰椎管狭窄症,双下肢神经根性痛、肌力减退、间歇性跛行等症状也会减少^[12]。腰椎管狭窄是治疗包括保守治疗和手术治疗,大多是研究显示手术的疗效更为明显,并且近期及远期的疗效优于保守治疗^[13-15]。手术治疗可通过减压椎板、解除神经根、马尾的压迫,进而缓解下肢疼痛、马尾综合征、间歇性跛行等症状,改善症状恢复功能。然而,手术的方式有很多^[6],包括减压手术方式、植骨融合和内固定方式。本文选取在我院治疗的 76 例老年腰椎管狭窄症患者,其中 43 例采用微创腰椎后路减压融合术(A 组),33 例患者接受全椎板切除手术(B 组)。对所有患者进行术后随访,对比分析两组患者的手术情况、术后不良反应发生率及 JOA 评分情况。

研究结果显示,微创腰椎后路减压融合术组(A 组)与传统全椎板切除术(B 组)的患者相比,手术切口小,术中出血量少及住院时间缩短,并且差异有统计学意义(P<0.05)。可能原因是微创手术切口小,对神经及脊椎的损伤较小,而传统全椎板切除术切口大,手术过程中对肌肉尤其是多裂肌的结构和功能的损伤较大,易于产生术后腰疼疼痛,因此,微创腰椎后路减压融合术有利于患者术后的恢复。以往的研究表明^[17,18],微创减压术是一种安全、简洁的手术方式,它于椎旁肌肉间隙内通过,有效地避免牵拉椎旁肌,减少患者的术中出血量以及缩短住院时间。本组结果还显示,两组患者的不良反应发生率差异无统计学意义,说明微创减压法没有增加手术风险。本研究中,两组患者术后 3 个月的 JOA 评分差异有统计学意义,并且采用微创腰椎后路减压融合手术方式的患者 JOA 评分显著优于传统全椎板切除术,进一步地说明了微创手术治疗老年腰椎管狭窄具有良好的疗效。与传统的全椎板切除术相比,微创减压融合手术大大地降低术后感染的几率和促进切口的愈合,能够降低神经损伤和硬膜过度牵拉、撕裂^[19,20]。

综上所述,与传统全椎板切除术相比,老年腰椎管狭窄患者采用微创腰椎后路减压融合手术方法创口小,术中出血量

少,降低术后不良反应发生的风险,更具有良好的临床效果,值得推广和普及应用。

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