

doi: 10.13241/j.cnki.pmb.2015.09.029

膝关节镜下有限清理与广泛清理术治疗膝关节骨关节炎的临床疗效

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摘要 目的:研究膝关节镜下有限清理与广泛清理术治疗膝关节骨关节炎的临床疗效。**方法:**选择2012年2月至2013年2月我院收治的80例膝关节骨关节炎患者,按随机数字表法平均分为研究组及对照组各40例,研究组行膝关节镜下有限清理术,对照组行广泛清理术;比较两组患者治疗优良率、手术前及术后1年膝关节功能评分及手术时间、住院时间等。**结果:**研究组患者治疗优良率为80.00%(32/40)高于对照组的75.00%(30/40),但差异无统计学意义($P>0.05$);研究组手术时间及住院时间分别为 $(30.4\pm 14.8)\text{h}$ 及 $(8.9\pm 4.3)\text{d}$,明显低于对照组的 $(60.6\pm 16.9)\text{h}$ 及 $(15.6\pm 6.8)\text{d}$,比较差异具有统计学意义($P<0.05$);两组术后1年膝关节功能评分较治疗前均明显改善,研究组术后Lysholm评分为 (73.2 ± 12.3) 分,与对照组的 (73.7 ± 11.9) 分比较差异无统计学意义($P>0.05$);两组患者均未出现术后感染等并发症,对照组2例出现术后下肢静脉血栓,研究组无严重并发症发生,两组比较差异无统计学意义($P>0.05$)。**结论:**膝关节镜下有限清理术治疗膝关节骨关节炎与广泛清理术疗效相当,但可明显缩短手术时间及住院时间,患者恢复快,值得推广应用。

关键词:膝关节镜;有限清理;广泛清理;骨关节炎

中图分类号:R68 **文献标识码:**A **文章编号:**1673-6273(2015)09-1711-04

Clinical Curative Effect of Arthroscopic Limited Debridement and Extensive Debridement in the Treatment of Osteoarthritis in the Knee

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ABSTRACT Objective: To study the clinical curative effect of arthroscopic limited debridement and extensive debridement in the treatment of osteoarthritis in the knee. **Methods:** 80 cases of knee osteoarthritis patients from February 2012 to February 2013 in our hospital were randomly divided into the study group and the control group with 40 cases in each according to the random number table method, patients of the study group underwent arthroscopic limited debridement, and the control group underwent extensive debridement. the excellent and good rate, knee joint function score for before operation and for 1 year after operation, operation time, hospitalization time et al. of two groups of patients were compared. **Results:** The excellent and good rate of the study group was 80.00%(32/40), higher than 75.00% (30/40) of the control group, but the difference was not statistically significant ($P>0.05$); The operation time and hospitalization time of the study group were $(30.4\pm 14.8)\text{h}$ and $(8.9\pm 4.3)\text{d}$, significantly lower than $(60.6\pm 16.9)\text{h}$ and $(15.6\pm 6.8)\text{d}$ of the control group, with significant difference ($P<0.05$); 1 year after operation, knee joint function score of the two groups significantly improved compared with before operation, preoperative Lysholm score was (73.2 ± 12.3) points, and there was not statistically significant difference compared with (73.7 ± 11.9) points of the control group ($P>0.05$); Postoperative complications such as infection were not found in the two groups, venous thrombosis of lower extremity occurred in 2 patients in the control group, the study group had no serious complications, there was no significant difference between the two groups ($P>0.05$). **Conclusion:** Arthroscopic limited debridement and extensive debridement has same efficacy for osteoarthritis in the knee, but can shorten the operation time and hospitalization time, patients recovered quickly, it is worthy of popularization and application.

Key words: Arthroscopic knee; Limited debridement; Extensive debridement; Osteoarthritis

Chinese Library Classification(CLC): R68 **Document code:** A

Article ID: 1673-6273(2015)09-1711-04

前言

膝关节骨性关节炎(Osteoarthritis, OA)是临床常见的退变性疾病,多发于老年患者,其病因尚不完全明确,发病时患者膝关节功能减退并伴有严重疼痛,严重影响患者的活动能力及生活质量^[1]。目前,临床对症治疗的方法主要有对症药物、理疗,传

统手术包括有人工关节置换术,但治疗疗效欠佳。随着微创技术的发展,关节镜技术以其诊断精准,创伤小,恢复快,可重复且不影响日后关节置换等优点在国内外得到广泛应用^[2]。虽然关节镜手术在膝关节骨关节炎的治疗中已为大多数OA患者所接受,且术后疼痛减轻,但尚缺乏明确的证据证明关节镜术可以治愈或阻止OA的发展,其关节镜下有限清理和广泛清理的有效性需进一步探讨和证实^[3]。本研究选择2012年2月至2013年2月我院80例膝关节骨关节炎患者,分别使用膝关节镜下有限清理及广泛清理进行治疗,探讨两组方法的疗效,为

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(收稿日期:2014-10-26 接受日期:2014-11-23)

骨性关节炎的关节镜下有效治疗提供理论依据。

1 资料与方法

1.1 一般资料

选择我院 2012 年 2 月至 2013 年 2 月收治的 80 例膝关节骨关节炎患者,所有患者均符合 1996 年美国风湿学院提出的膝关节骨关节炎的临床诊断标准^[1]。纳入标准:①患者表现膝关节局限性反复发作疼痛、活动痛、髌骨关节压榨疼痛;②膝关节变形、僵硬、活动受限;③膝关节肿胀且伴有弹响;④关节内积液、磨擦感;⑤晨僵 ≤ 30 min 等。排除标准:肝肾肾功能不全、心脑血管病、肿瘤等严重疾病患者。按随机数字表法平均分为研究组及对照组各 40 例,均有明显的疼痛及关节肿胀,内科服药镇痛治疗效果不佳。研究组 40 例患者中男 23 例,女 17 例;年龄 57~76 岁,平均 (61.2 ± 6.8) 岁;病程 0.5~4.5 年,平均 (2.4 ± 1.5) 年;发病部位:右膝 14 例,左膝 15 例,双膝 11 例;X 线分级依据 Kellgren-Lawrence 标准:I 级 19 例,II 级 12 例,III 级 9 例。对照组 40 例患者中男 21 例,女 19 例;年龄 54~73 岁,平均 (61.4 ± 6.4) 岁;病程 0.5~5 年,平均 (2.6 ± 1.6) 年;发病部位:右膝 12 例,左膝 18 例,双膝 10 例;X 线分级:I 级 17 例,II 级 15 例,III 级 8 例。两组患者在性别、年龄、病程、发病部位及 X 线片表现等方面比较差异无统计学意义($P > 0.05$),具有可比性。

1.2 手术方法

研究组患者行膝关节镜下有限清理手术,取仰卧位行腰硬联合麻醉,经关节镜检查后,采用内外侧膝眼入路,仅对关节进行灌洗,摘除游离体,对不稳定半月板裂瓣及即将脱落的半月

离软骨瓣行部分切除,不进行广泛滑膜切除和骨赘摘除以及软骨修整成形。对照组患者行膝关节镜下广泛清理术,患者手术位、麻醉及入路同研究组,经关节镜检查后,使用 ≥ 10 L 液体对关节进行灌洗,将关节镜下看到的非正常组织,包括增生的滑膜、骨赘、粗糙软骨及碎屑全部清除,将半月板修整至其表面光滑、边缘坚实,同时打磨软骨,摘除游离体。两组患者清理术结束后进行关节冲洗、抽液,切口皮内缝合,加压包扎等处理。

1.3 评价标准

疗效评价标准:依据鄢宏等膝关节疗效评定标准^[2],①优:关节疼痛消失,无肿胀,可正常活动;②良:关节疼痛、肿胀及活动度较术前有明显改善;③可:关节疼痛、肿胀及活动度较术前部分改善;④差:症状无改善。优良率 $= (\text{优} + \text{良}) / \text{总例数} \times 100\%$ 。膝关节功能评分:依据 Lysholm 评分^[3]以跛行(5 分)、负重(5 分)、下蹲(5 分)、肿胀(10 分)、爬楼梯(10 分)、交锁(15 分)、不稳定(25 分)、疼痛(25 分),满分 100 分,评分越高患者膝关节功能越好。同时记录两组患者手术时间、住院时间及术后并发症情况。

1.4 随访统计学处理

两组患者均进行 12~22 个月随访,平均 (14.5 ± 3.5) 个月,应用 SPSS13.0 分析数据,计量资料以平均数 $(\bar{x} \pm s)$ 表示,进行 t 检验,计数资料用 χ^2 检验,以 $P < 0.05$ 差异有统计学意义。

2 结果

2.1 两组患者治疗疗效比较

研究组患者治疗优良率为 80%(32/40),与对照组 75%(30/40)比较差异无统计学意义($P > 0.05$),见表 1。

表 1 两组患者治疗疗效比较(n, %)

Table 1 Comparison of curative effect between two groups of patients(n, %)

组别 Groups	例数 Cases	优 Excellent	良 Good	可 Fair	差 Poor	优良率 Excellent and good rate
研究组 Study group	40	14	18	6	2	80.00
对照组 Control group	40	13	17	7	3	75.00
χ^2						1.02
P						0.56

2.2 两组患者一般手术情况比较

研究组患者平均手术时间及住院时间分别为 (30.4 ± 14.8)

h 及 (8.9 ± 4.3) d,明显低于对照组的 (60.6 ± 16.9) h 及 (15.6 ± 6.8) d,比较差异具有统计学意义($P < 0.05$),见表 2。

表 2 两组患者一般手术情况比较($\bar{x} \pm s$)

Table 2 Comparison of the general operation situation between two groups($\bar{x} \pm s$)

组别 Groups	例数 Cases	手术时间(h) Operation time(h)	住院时间(h) Hospitalization time(d)
研究组 Study group	40	30.4 $\pm$ 14.8	8.9 $\pm$ 4.3
对照组 Control group	40	60.6 $\pm$ 16.9	15.6 $\pm$ 6.8
t		17.34	6.45
P		0.01	0.01

2.3 两组患者治疗前后膝关节功能评分比较

两组患者术前及术后 1 年进行 Lysholm 评分比较差异无统计学意义($P > 0.05$),但两组患者术后 Lysholm 评分较术前均改善明显,比较差异具有统计学意义($P < 0.05$),见表 3。

2.4 两组患者并发症发生情况

两组患者术后无感染及感染等并发症的发生,对照组 2 例

出现术后下肢静脉血栓,并发症发生率为 5.00%,经治疗 2 周后恢复;研究组无严重并发症情况发生,两组比较差异无统计学意义($P > 0.05$)。

3 讨论

骨关节炎是临床老年常见多发病,是一种慢性关节软骨的

表 3 两组患者手术前后膝关节功能评分比较($\bar{x} \pm s$)Table 3 Comparison of knee joint function score before and after operation between two groups($\bar{x} \pm s$)

组别 Groups	例数 Cases	术前 Before operation	术后 After operation	t	P
研究组 Study group	40	58.4 $\pm$ 12.4	73.2 $\pm$ 12.3	4.32	0.02
对照组 Control group	40	58.6 $\pm$ 12.2	73.7 $\pm$ 11.9	4.21	0.02
t		0.03	0.04		
P		1.23	1.20		

退行性变疾病,对患者的活动及生活质量造成严重的负面影响^[7]。其主要病理基础是关节软骨的退行性变,进而造成膝关节形态学上的变化,导致关节负重表现应力的重新分布和关节稳定性的重建,包括骨的形成、关节错位和关节囊及韧带张力的重新调节等^[8]。因此,骨关节炎的病化部位包括软骨组织、软骨下骨、滑膜及周围韧带肌肉。临床上患者多表现出关节疼痛、肿胀及活动受限等症状,且多与衰老、创伤、肥胖及代谢障碍等疾病相关^[9,10]。x线片多表现为关节间隙狭窄,骨赘及游离体的形成。临床保守治疗方法效果不佳,多数患者需行关节切开清理^[11]。

近年来随着微创技术的发展,膝关节镜下清理术因创伤小、恢复快等优势在临床中得到越来越多的应用,在关节镜下可直视膝内病变部位,对其病变程度进行有效评估后切除滑膜、游离体同时松解卡压带,并通过大量液体的冲洗,进一步清除炎性介质改善关节的内环境,阻断骨性关节炎的恶性循环^[12,13]。有研究证实,骨关节炎患者行膝关节镜下清理术后疼痛得到有效缓解,缓解率高达 80%,且其功能改善明显^[14]。膝关节镜清理术包括有限清理及广泛清理,已有研究证实^[15],镜下将受损的半月板不稳定部分切除,保留稳定完好的部分半月板的有限清理术,既能有效缓解关节疼痛,亦能延缓关节退变的进程,且研究证实有限清理及广泛清理的治疗效果相当^[16,17]。本研究对我院 80 例膝关节骨性关节炎患者分别使用有限及广泛清理,使用有限清理的研究组患者治疗优良率为 80%,与行广泛清理术的对照组的 75%比较差异无统计学意义;同时比较术前及术后两组患者膝关节功能评分发现,两组患者 Lysholm 评分较治疗前均明显改善,但两组术后评分比较差异无统计学意义。结果进一步证明两组清理术对骨关节炎的治疗效果相当,均能有效缓解患者临床症状,阻断恶性循环。另外,研究组患者手术时间及住院时间均明显短于对照组,且无严重并发症的发生,而对照组术后并发症发生率为 5.00%,说明有限清理术可明显缩短手术时间,减少并发症的发生,患者恢复较快,与相关报道研究结果相似^[18,20]。

总之,对骨关节炎患者在膝关节镜下行有限清理时,仅对损伤部位及游离骨赘进行清理,而不处理不影响关节活动的正常部位,同时将关节软骨修整成型,相对于将所有非正常组织全部摘除的广泛清理术,能够最大限度地减少手术创伤,缩短手术时间,有效地降低了手术难度,行有限清理术的患者较行广泛清理术后的患者术后并发症少,恢复快,值得临床推广。

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