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内固定与关节置换手术治疗骨质疏松性髋部骨折的临床效果及术后并发症的影响因素分析*

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摘要 目的:分析内固定与关节置换手术治疗骨质疏松性髋部骨折的临床效果及其术后并发症的影响因素。**方法:**将2017年4月至2018年5月因骨质疏松性髋部骨折于我院进行手术治疗的78例患者作为研究对象,参考患者自身意愿按照采取手术方案的不同将所有患者分为内固定组与关节置换组。内固定组主要采用动力髋螺钉内固定治疗;关节置换组采用全髋关节置换术治疗。对比分析两组治疗后并发症的发生情况及关节功能恢复程度。**结果:**关节置换组手术治疗后关节功能的恢复情况显著优于内固定组($P<0.05$),术后并发症发生率低于内固定组($P<0.05$);患者术后并发症发生的主要影响因素包括:术前存在合并症、手术时机 $\geq 2h$ 、采用内固定手术。**结论:**与内固定术相比,关节置换手术治疗骨质疏松性髋部骨折患者的疗效和安全性均更高,但采用该手术治疗时需注意手术操作的规范性及手术时机。

关键词:骨质疏松;髋部骨折;内固定术;关节置换术;影响因素**中图分类号:**R683.2 **文献标识码:**A **文章编号:**1673-6273(2019)16-3160-04

Clinical Efficacy of Internal Fixation and Joint Replacement in the Treatment of Patients with Osteoporotic Hip Fractures and the Influencing Factors of Postoperative Complications*

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ABSTRACT Objective: To analyze the clinical efficacy of internal fixation and joint replacement in the treatment of patients with osteoporotic hip fractures and the influencing factors of postoperative complications. **Methods:** 78 patients who underwent surgical treatment in our hospital due to osteoporosis hip fracture were selected as subjects from April 2017 to May 2018. All patients were divided into the internal fixation group and the joint replacement group according to their own wishes and according to the different surgical plans. The internal fixation group was treated with dynamic hip screw. Total hip arthroplasty was performed in the arthroplasty group. The incidence of complications and the recovery of joint function were compared between two groups. **Results:** The recovery of joint function in the joint replacement group was significantly better than that in the internal fixation group ($P<0.05$), and the incidence of postoperative complications was lower than that in the internal fixation group ($P<0.05$). The main influencing factors of postoperative complications include: preoperative complications, operative time $\geq 2h$, internal fixation. **Conclusion:** Compared with internal fixation, joint replacement is more effective and safer in the treatment of osteoporosis hip fracture.

Key words: Osteoporosis; Hip fracture; Internal fixation; Joint replacement; Influencing factors**Chinese Library Classification(CLC):** R683.2 **Document code:** A**Article ID:** 1673-6273(2019)16-3160-04

前言

骨质疏松性髋部骨折为临床常见疾病,多发于老年人,对其生活质量及身心健康均具有严重影响,同时可能因骨折引发的并发症而危及患者生命^[1]。目前,临床针对骨质疏松性髋部骨

折患者主要采用手术治疗,常见的手术方式包括内固定术及人工关节置换术^[2]。以往多位学者就上述两种手术方式在骨质疏松性髋部骨折患者临床治疗中的具体效果及术后并发症发生情况进行了详细分析,其指出内固定术治疗后,患者因机体功能的衰退可能导致多种并发症的产生^[3],手术过程中患者同样

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存在较大的风险,因而不推荐临床应用。相较于内固定术,人工置换术疗效较为显著,且手术安全性更高^[4,5]。本院选取收治的78例骨质疏松性髋部骨折患者,将其随机分为两组并予以不同手术方式治疗,主要探讨了内固定与关节置换手术治疗骨质疏松性髋部骨折的临床效果及其术后并发症的影响因素,以期提高骨质疏松性髋部骨折的临床效果,结果报道如下。

1 资料与方法

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

Groups	N	Sex		Age
		Male	Female	
Internal fixation group	39	21(53.85)	18(46.15)	76.15 $\pm$ 7.26
Joint replacement group	39	22(56.41)	17(43.59)	77.03 $\pm$ 7.31
χ^2/t		0.133	0.133	0.533
<i>P</i>		0.716	0.716	0.594

1.2 纳入标准

所有入选患者入院后均表现出骨折处剧烈疼痛,后进行常规影像学检查结合临床表现确诊,患者年龄均 ≥ 65 岁。排除标准:因其他原因引起髋关节剧烈疼痛的患者;具有骨折史及手术史的患者;对研究所采用手术治疗方式存在禁忌症的患者;合并器其他部位骨折的患者;排除病案资料缺失患者。

1.3 治疗方法

内固定组主要采用动力髋螺钉内固定治疗,术前垫高侧髋粗隆部,在C臂机的辅助下对骨折部位行复位处理,确认复位效果后于股骨近端外侧做切口,沿135°导向器插入导针,C臂机透视至满意位置,后采用三联扩孔器沿导针行扩孔处理,采用合适的动力髋螺钉置入股骨颈骨质中,并结合患者自身情况采用相应的动力髋螺钉钢板进行股骨干固定。在C臂机的辅助下进行置入位置确定,后对切口进行常规清洗,止血处理,留置引流管进行负压引流处理,后逐层缝合切口,结合患者药物耐受性选用合理抗菌药物进行感染预防。关节置换组均采用全髋关节置换术治疗,术中患者取仰卧位,垫高患髋部,常规处理髋臼,放置臼杯,后将小粗隆作为中心向前倾斜15°后采用牙槽锉进行扩髓处理,结合患者自身情况选择合适的股骨柄假体、股骨头假体进行放置,后对髋关节进行复位处理,上述处理后

1.1 一般资料

选取本院收治的78例骨质疏松性髋部骨折患者,术前均经影像学检查确诊,将其随机分为内固定组与关节置换组,每组患者均39例。内固定组中,男性患者21例,女性患者18例,平均年龄(76.15 $\pm$ 7.26)岁;关节置换组中,男性患者22例,女性患者17例,平均年龄(77.03 $\pm$ 7.31)岁。两组一般资料对比差异均无统计学意义($P>0.05$),具有可比性,见表1。

对关节的松紧程度进行测量,在达到标准后对切口进行常规冲洗,放置引流管进行负压引流处理,并逐层缝合切口,术后常规进行抗感染治疗。

1.4 观察项目

观察和对比两组并发症的发生情况及关节功能恢复程度,并就影响患者并发症发生的主要因素进行统计分析。其中,患者关节功能恢复程度的评价主要参考Hamis髋部评分系统并结合患者治疗后临床表现进行综合评价:疼痛评分共44分,关节功能评分共47分,畸形评分4分,关节活动评分5分,总分共100分。将得分 ≥ 90 分的患者评定为关节功能恢复程度为优;将80-89分评价为良;60-79分评价为中; <60 分评价为差。

1.5 统计学方法

使用统计学软件SPSS20.0分析数据。计量资料均以($\bar{x}\pm s$)表示,组间比较采用t检验,以[例(%)]表示计数资料,组间比较采用 χ^2 检验,采用Logistic回归模型进行多因素分析, $P<0.05$ 可认为差异有统计学意义。

2 结果

2.1 两组关节恢复程度分析

Table 2 Comparison of the joint recovery between two groups[n(%)]

Groups	n	Excellent	good	well	bad	Good rate
Internal fixation group	39	21(53.85)	14(35.90)	3(7.69)	1(2.56)	89.74
Joint replacement group	39	13(33.33)	14(35.90)	8(20.51)	4(10.26)	69.23
χ^2		8.562	0.000	6.785	4.942	12.899
<i>P</i>		0.003	1.000	0.009	0.026	0.000

如表2所示,治疗后,关节置换组关节恢复优良率显著高于内固定组($P<0.05$)。

2.2 两组术后并发症发生情况分析

如表3所示,关节置换组术后并发症的发生率显著低于内

固定组($P<0.05$)。

2.3 术后并发症的单因素分析

本次研究所选取的78例患者经治疗后共23例出现并发症,并发症情况的发生与术前合并症、手术时机、手术方式显著

相关($P<0.05$),详见表 4。

Table 3 Comparison of the incidence of complications between the two groups [n(%)]

Groups	n	Acne	lung infection	Cardiovascular diseases	Lower limb thrombosis	Total incidence
Joint replacement group	39	2(5.13)	3(7.69)	1(2.56)	1(2.56)	17.95
Internal fixation group	39	4(10.26)	5(12.82)	5(12.82)	2(5.13)	41.03
χ^2		1.853	1.430	7.415	0.893	12.809
P		0.173	0.232	0.006	0.345	0.000

Table 4 Single factor analysis of the postoperative complications[例(%)]

Project		Total number of cases (n=78)	Incidence of complications	χ^2	P
Age	≥ 75	41	12(29.27)	0.005	0.943
	<75	37	11(29.73)		
Gender	Male	43	13(30.23)	0.066	0.797
	Female	35	10(28.57)		
Preoperative complications	yes	32	17(53.13)	36.298	0.000
	no	46	6(13.04)		
Surgical timing (d)	After injury <2	29	4(13.79)	16.115	0.000
	After injury ≥ 2	49	19(38.78)		
Surgical approach	Joint replacement	39	7(17.95)	12.809	0.000
	Internal fixation	39	16(41.03)		

2.4 术后并发症的多因素回归分析

经 Logistic 回归分析证实患者术前存在合并症,手术时

机 $\geq 2h$,采用内固定手术治疗均为感染发生的独立影响因素($P<0.05$),详见表 5。

Table 5 Multi-factor Logistic Regression analysis of the postoperative complications

Project	B	SE	Wald	OR	P	95%CI
Preoperative complications	3.155	0.937	6.405	1.736	0.005	1.454-4.886
Surgical timing $\geq 2h$	2.439	0.929	6.398	1.890	0.005	1.690-5.784
Internal fixation	2.874	0.981	10.633	2.140	0.001	2.045-10.314

3 讨论

骨质疏松性髌部骨折是骨科临床治疗中较为常见的一种骨折类型,该病主要发生于年龄超过 65 岁的老年群体,属于一种创伤性疾病^[6]。该病的发生主要与老年人年龄增长,骨质逐渐疏松,机体协调能力变低有关^[7,8]。老年患者因自身身体情况,在髌部因各种原因而出现轻微损伤后极有可能出现骨折,因而该病在临床中发病率极高^[9,10]。该病虽通过保守治疗症状可见缓解,但药物治疗奇效较慢,且疗效并不显著,患者病症随时都面临复发的风险^[11]。

本研究结果显示关节置换手术治疗下的患者在关节功能恢复优良率上明显高于内固定组患者,并发症发生率较内固定组更低。结合国内外多位学者相关研究报道^[12-17],内固定因手术方式的创伤性较高,因而患者需要长期卧床休息,长时间不能

进行日常活动及身体基础锻炼,易导致褥疮产生;同时在行内固定手术治疗时,固定物切割股骨头失效,导致关节功能退化而产生并发症^[18-21]。考虑到年龄超过 65 岁的患者在进行内固定手术治疗后股骨头坏死几率较高,且股骨颈骨折后断端间存在较大的剪切力,致使断端无法固定,最终可能引起内固定松动^[21-23]。而关节置换术临床应用后,患者恢复速度较快,在短时间内就可下床进行基本的活动,避免了骨折畸形愈合、延迟愈合以及不愈合等并发症发生^[24]。后续研究中,我们还发现手术治疗的延长以及术前合并症的出现均可能增加患者术后并发症发生率^[25,26]。手术治疗时间延长后,患者病情随之发展,因而可能导致后续手术治疗难度加大,易出现治疗效果不高的情况,因此术后并发症发生率较高^[27,28]。而术前合并症在进行手术治疗时还未经相应措施进行处理,其对手术的进程也会造成影响,对手术治疗效果及患者预后均有一定程度威胁^[29,30]。因此,

针对骨质疏松性髋部骨折患者应做到及早的准确诊断,并及时制定相应手术治疗方案实施治疗,避免错过手术治疗的最佳时机。同时,在进行手术前需对患者合并症情况及适应证进行分析,及早提出相应的解决措施,改善患者手术治疗环境,从而最终提升治疗效果,保证患者在手术治疗过程中的安全性。

综上所述,关节置换术因其手术治疗效果显著、安全性较高、术后并发症较少的优势可作为骨质疏松性髋部骨折患者的主要治疗方式。考虑到患者术后并发症的发生主要受术前存在合并症、手术时机 ≥ 2 h等因素的影响,医师在制定治疗方案时需进行及时且充分的术前准备,在保证疗效的同时改善患者预后,减少意外事件的发生。

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