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人工髋关节置换术治疗高龄患者股骨粗隆间骨折的临床疗效研究*

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摘要 目的:探究人工髋关节置换术治疗高龄患者股骨粗隆间骨折的临床疗效。**方法:**选择 40 例高龄股骨粗隆间骨折患者并将其随机分为两组,观察组给予人工髋关节置换术治疗,对照组经股骨近端髓内钉内固定术治疗。观察比较两组 L2-4 椎体骨密度、疼痛程度、髋关节功能恢复情况及 Harris 评分。**结果:**治疗后,两组 L2-4 椎体骨密度均显著高于治疗前($P<0.05$),且观察组显著高于对照组($P<0.05$);观察组疼痛比例较治疗前明显降低($P<0.05$),且显著低于对照组($P<0.05$);观察组髋关节恢复优良率为 95.0%,显著高于对照组(70.0%, $P<0.05$);两组 Harris 评分均显著高于治疗前($P<0.05$),且观察组显著高于对照组($P<0.05$)。**结论:**采用人工髋关节置换术治疗高龄股骨粗隆间骨折的疗效明显优于经股骨近端髓内钉内固定术治疗,其可有效促进髋关节功能恢复,减轻患者疼痛。

关键字:人工髋关节置换术;股骨近端髓内钉内固定术;高龄股骨粗隆间骨折

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Clinical Effect of Hip Replacement and Conservative Treatment for the Femoral Neck Fracture in the Elderly Patients*

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ABSTRACT Objective: To explore the clinical efficacy of artificial hip replacement in the treatment of femoral neck fractures in elderly patients. **Methods:** 40 cases of elderly patients with femoral neck fracture were randomly divided into two groups, the observation group was treated by total hip replacement, and the control group was treated with proximal femoral nailing. Then the L2-4 bone mineral density, pain situation, hip function recovery and Harris score were compared between two groups. **Results:** After treatment, the L2-4 bone mineral density of both groups were significantly higher than those before treatment ($P<0.05$), which was significantly higher in the observation group than that of the control group ($P<0.05$), the pain ratio in the observation group was significantly decreased ($P<0.05$), which was significantly lower than that in the control group ($P<0.05$), the recovery rate of hip joints in the observation group was 95.0%, which was significantly higher than that of the control group (70.0%)($P<0.05$), the Harris scores of the two groups were significantly higher than before treatment($P<0.05$), which was significantly higher in the observation group than that of the control group($P<0.05$). **Conclusion:** Hip replacement could more effectively enhance the clinical efficacy in the treatment of femoral neck fractures in elderly patients than proximal femoral nailing, it could promote the recovery of hip function and reduce the pain of patients.

Key words: Hip replacement; Proximal femoral nailing; Femoral neck fracture in the elderly

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前言

股骨粗隆间骨折是骨科常见创伤病,多发生于老年人,随着人口趋于老龄化发展,发病率不断上升^[1]。患者发生股骨粗隆间骨折时会感觉患处剧烈疼痛,严重时甚至会发生昏厥,病死率较高,更多患者下肢功能丧失,严重影响其生活质量^[2,3]。股骨粗隆间骨折患者多为高龄人群最主要的原因是老年人普遍呈骨质疏松,骨强度降低、髋周肌群退行性变,这种情况下加之复杂外力作用,即可导致股骨粗隆间骨折^[4]。由于高龄患者耐受性

较差,基础疾病较多,病情复杂,因此临床治疗具有较大难度^[5]。

股骨粗隆间骨折的治疗以内固定术为主,包括股骨近端髓内钉(PFNA)、G 动力髋螺钉(DHS)等,这种治疗方法对于稳定股骨粗隆间骨折效果较好,但治疗严重骨质疏松或不稳的股骨粗隆间骨折患者时,术后卧床时间较长,并发症发生率较高,影响患者预后及疗效^[6,7]。目前,临床逐渐推广采用人工髋关节置换术治疗股骨粗隆间骨折,疗效较好。本研究主要探讨了究人工髋关节置换术与股骨近端髓内钉内固定术治疗高龄股骨粗隆间骨折的临床疗效。现报道如下:

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1 资料与方法

1.1 一般资料

选择 2014 年 7 月~2017 年 7 月我院收治的 40 例高龄股骨粗隆间骨折患者,男 22 例,女 18 例,年龄为 73~88 岁,平均年龄为(76.4± 6.7)岁。其中,12 例下床摔伤,15 例滑倒摔伤,13 例交通致伤;7 例伴有高血压,13 例伴有冠心病,11 例伴有糖尿病,9 例伴有支气管炎。所有患者均经 X 线诊断为股骨粗隆间骨折,且均于伤后 3 d 入院。排除合并类风湿关节炎、病理性骨折患者,将所有患者随机分为两组,每组各 20 例。

1.2 治疗方法

患者入院后均接受常规治疗,控制血压、血糖等。观察组经人工髋关节置换术治疗。术前,经髋关节、股正、侧位 X 线片检查,确定髋臼情况、股骨骨折位置。首先,给予患者硬膜外麻醉,协助保持健侧卧位,做髋关节后外侧切口,逐层切开,将股骨颈暴露出来,采用髋臼锉将髋臼扩大直至白壁渗血,再采用合适髋臼杯置换,并进行复位,止血,冲洗,放置引流管,最后逐层缝合。术后 2 d,拔除引流管,次日可行患肢关节、肌肉功能锻炼。术后 7 d 可下地站立、行走。对照组经股骨近端髓内钉内固定术治疗。首先给予患者硬膜外麻醉,取仰卧位,健侧下肢伸直,患侧下肢分别屈髋、屈膝 90°,使患侧做最大幅度外展并固

定,股骨近端髓内钉内固定术具体操作及过程参考 Ozkan 等^[9]研究报道,术后第 2 d 指导患者行适当的屈伸活动,术后 7 d 可以在床上坐起,术后 6~8 周可以下地适当活动。

1.3 临床观察指标

(1)L2-4 椎体骨密度:采用双能 X 线骨密度仪测定 L2-4 椎体骨密度。(2)疼痛情况^[9]:无痛且关节活动正常;轻微疼痛且关节活动度达 80%以上;中度疼痛且关节活动受限;重度疼痛且关节活动严重受限;疼痛比例=(中度+重度)/总例数×100%。(3)髋关节功能:根据 Harris 评分行髋关节功能评定:优即 90~100 分,良即 80~89 分,可即 70~79 分,差即 <70 分。

1.4 统计学方法

所有数据采用 SPSS 20.0 进行统计学分析,计量资料以($\bar{x} \pm s$)表示,组间比较采用 t 检验,计数资料以%表示,组间比较采用 χ^2 检验,以 $P < 0.05$ 表示差异具有统计学意义。

2 结果

2.1 两组治疗前后 L2-4 椎体骨密度与疼痛情况对比

治疗后,两组 L2-4 椎体骨密度均高于治疗前,观察组显著高于对照组($P < 0.05$);观察组疼痛比例较治疗前明显下降,且显著低于对照组($P < 0.05$)。见表 1。

表 1 两组治疗前后 L2-4 椎体骨密度与疼痛情况对比

Table 1 Comparison of the L2-4 bone mineral density and pain situation between two groups before and after treatment

Groups	Cases	L2-4 bone mineral density(g/cm ²)		Pain situation[n(%)]	
		Before treatment	After treatment	Before treatment	After treatment
Observational group	20	0.52± 0.02	0.65± 0.03**	18(90)	5(25)**
Control group	20	0.51± 0.04	0.56± 0.03*	17(85)	12(60)*

Note: compared with before treatment, * $P < 0.05$; compared with the control group, ** $P < 0.05$.

2.2 两组治疗后髋关节功能恢复情况对比

观察组治疗后髋关节恢复优良率明显高于对照组($P < 0.05$),见表 2。

表 2 两组治疗后髋关节功能恢复情况对比[例(%)]

Table 2 Comparison of the recovery of hip function between two groups after treatment [n(%)]

Geoups	Cases	Excellent	Good	Moderate	Poor	Excellent and good rate
Observational group	20	11(55.0)	8(40.0)	1(5.0)	0(0.0)	19(95.0)*
Control group	20	7(35.0)	7(35.0)	4(20.0)	2(10.0)	14(70.0)

Note: compared with before treatment, * $P < 0.05$.

2.3 两组治疗后 Harris 评分放入比较

两组治疗后 Harris 评分均明显高于治疗前,且观察组明显

高于对照组($P < 0.05$),见表 3。

表 3 两组治疗前后 Harris 评分的比较($\bar{x} \pm s$)

Table 3 Comparison of the Harris scores between two groups before and after treatment($\bar{x} \pm s$)

Groups	Cases	Harris scores(scores)	
		Before treatment	After treatment
Observational group	20	72.6± 4.15	91.0± 3.03**
Control group	20	72.4± 4.20	82.0± 4.11*

Note: compared with before treatment, * $P < 0.05$; compared with the control group, ** $P < 0.05$.

3 讨论

随着人口老龄化发展, 高龄群体骨折发病率不断上升, 其中股骨粗隆间骨折发病率较高^[10]。高龄患者身体机能减退, 普遍存在骨质疏松, 骨强度降低、髋周肌群退行性变, 稳定性较差, 因此极易摔倒, 下肢扭转, 甚至在创伤不明显的情况下也可引发骨折^[11]。摔倒后多数患者表现为髋部疼痛, 难以移动, 伴有屈髋屈膝或外展障碍, 难以愈合, 因此有效治疗高龄股骨粗隆间骨折具有重要临床意义^[12,13]。传统采用碳酸钙 D3、鲑鱼降钙素及阿仑膦酸钠等药物治疗^[14], 碳酸钙 D3 为骨质疏松基础用药, 鲑鱼降钙素可刺激生成骨细胞, 提高骨密度, 阿仑膦酸钠可抑制骨吸收、促进骨折愈合^[15]。但患者经治疗后预后效果较差, 只能暂时缓解患者疼痛, 极易复发, 严重影响患者的生活质量^[16]。内固定手术治疗具有固定牢固、抗弯强度高等特点, 对于稳定性股骨粗隆间骨折具有较好的疗效, 但植入的较粗大的内钉会对患者股骨颈供血造成影响, 延长愈合时间, 患者需长期卧床休养, 且易发生内固定松动、骨折畸形愈合等并发症^[17,18]。

人工髋关节置换术是采用人工材料制成仿真部件换取全髋组织的手术方式, 将患者骨头松质骨和假体一同植入到其股骨髓腔内, 从而巩固股骨假体稳定性。尽管该手术创伤较大, 存在一定风险, 但其远期疗效较好, 可有效减轻术后疼痛^[19,20]。在手术实施过程中, 应注意大粗隆处骨量保留情况, 防止术后假体松动^[21]。与内固定术治疗相比, 人工髋关节置换术具有固定牢固、无需牵引等优点, 患者术后可及早进行功能锻炼, 缩短卧床时间, 有效缓解疼痛, 从而有效避免术后多种并发症的发生, 人工髋关节置换术对股骨粗隆间骨折的疗效目前已得到广泛认同^[22-24]。

骨密度下降、骨脆性增加是导致骨质疏松的主要原因, 也是骨折的主要风险因素^[25]。本研究结果显示观察组治疗后 L2-4 椎体骨密度明显比对照组高, 表明与股骨近端髓内钉内固定术治疗相比, 人工髋关节置换术可明显增加患者骨密度, 另外, 术后适当的关节、肌肉功能锻炼可使骨骼血流量增加, 促进钙的吸收, 维持骨量^[26,27]。观察组治疗后疼痛比例明显比对照组低, 表明与股骨近端髓内钉内固定术治疗相比, 人工髋关节置换术更能够有效缓解患者的疼痛症状^[28]。观察组治疗后髋关节优良率、Harris 评分明显高于对照组, 术后患者髋关节功能恢复快, 可尽早下床进行负重活动, 促进骨折愈合, 有利于患者尽快恢复全身状况和关节功能, 提高患者生活质量。因此, 人工髋关节置换术更适合高龄、骨折不稳定患者^[29,30]。

综上所述, 采用人工髋关节置换术治疗高龄股骨粗隆间骨折的疗效明显优于经股骨近端髓内钉内固定术治疗, 其可有效促进髋关节功能恢复, 减轻患者疼痛。

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