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全髋关节置换术与人工股骨头置换术治疗老年股骨颈骨折的疗效比较

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摘要 目的:探讨全髋关节置换术与人工股骨头置换术治疗老年股骨颈骨折的疗效。**方法:**选择在我院的 82 例行手术置换治疗的老年股骨颈骨折患者,随机分为观察组和对照组,每组 41 例。观察组采用全髋关节置换术,而对照组实施人工股骨头置换术。观察并比较两组患者的手术时间、术中出血量、血压、术后引流及髋关节功能等。**结果:**观察组手术时间、术中出血量及收缩压均显著高于对照组,差异具有统计学意义($P<0.05$);术后引流量及并发症的发生率,两组比较无显著性差异($P>0.05$)。观察组患者术后 Harris 评分为(93.25 ± 4.51),对照组患者 Harris 评分为(82.76 ± 3.82),观察组显著优于对照组,差异具有统计学意义($P<0.05$)。**结论:**与人工股骨头置换术相比,全髋关节置换术用于治疗老年股骨颈骨折具有创伤小,恢复快的临床效果,患者术后髋关节功能恢复情况良好,值得在临床推广应用。

关键词:股骨颈骨折;全髋关节置换术;人工股骨头置换术;临床疗效

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Comparison of the Clinical Effects of the Total Hip Arthroplasty and the Artificial Femoral Replacement on the Treatment of Senile Femoral Neck Fracture

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ABSTRACT Objective: To discuss the clinical effects of the total hip replacement and the artificial femoral replacement on the treatment of senile femoral neck fractures. **Methods:** A total of 82 elderly patients with the femoral neck fracture who were treated in our hospital by replacement surgery were selected and randomly divided into the observation group and the control group, with 41 cases in each one. The patients in the control group were treated by the artificial femoral replacement, while the patients in the observation group were treated by the total hip arthroplasty. Then the operation time, the blood loss, the blood pressure, the function of articulation coxae and the incidence of complications were observed and compared between two groups. **Results:** The operation time, the blood loss and the SBP of patients in the observation group were higher than those of the patients in the control group with statistically significant differences ($P<0.05$). There was no statistically significant difference about the hydrops and the incidence of complications between two groups($P>0.05$). Harris score of patients in the observation group was (93.25 ± 4.51) which was higher than (82.76 ± 3.82) of patients in the control group ($P<0.05$). **Conclusion:** When compared with the artificial femoral head replacement, the total hip replacement is more worthy of application for senile femoral neck fracture with the advantages of less trauma and better recovery, as well as the postoperative functions of hip joint.

Key words: Femoral neck fracture; Artificial femoral head replacement; Total hip replacement; Clinical effects

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前言

随着我国人口老龄化日渐严重,高龄人群中髋关节骨折或坏死的发病率明显呈上升趋势。但高龄患者身体机能逐渐衰退,骨质疏松现象严重,肌肉力量及柔韧性大幅下降,极易导致股骨颈骨折的发生^[1-3]。而随着年龄增长,股骨颈骨折的发生率也随之升高^[4]。目前,临床用于治疗该类疾病的方法主要是全髋

关节置换术(THA)和人工股骨头置换术^[5]。大量研究显示,全髋关节置换术是相对有效的临床治疗方法^[6-8]。为探讨全髋关节置换术和人工股骨头置换术的临床疗效,本研究对我院老年股骨颈骨折患者的临床资料进行回顾分析,现报告如下。

1 资料与方法

1.1 研究对象

选择 2010 年 5 月-2013 年 5 月在我院骨科住院治疗的 82 例经确诊为股骨颈骨折的老年患者作为研究对象(年龄均 ≥ 60 岁),术前患者均签署知情同意书,积极配合手术治疗。根据手术方法将患者分为观察组和对照组,每组 41 例。观察组包括男

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22例,女19例,年龄69-81岁,平均 71.23 ± 6.24 岁;其中新鲜骨折36例,陈旧性骨折5例;Garden分型:Ⅱ型7例,Ⅲ型23例,Ⅳ型11例;骨折部位:左侧25例,右侧16例;致伤原因:跌伤27例,交通事故10例,坠落伤4例;合并高血压31例,糖尿病20例,冠心病17例,脑梗死11例,肺气肿5例。对照组包括男24例,女17例,年龄67-85岁,平均 (72.21 ± 7.43) 岁;其中新鲜骨折38例,陈旧性骨折3例;Garden分型:Ⅱ型9例,Ⅲ型24例,Ⅳ型8例;骨折部位:左侧23例,右侧18例;致伤原因:跌伤29例,交通事故9例,坠落伤3例;合并症高血压29例,糖尿病21例,冠心病15例,脑梗死9例。两组患者的年龄、骨折部位及致伤原因等一般资料无显著差异($P>0.05$),具有可比性。

1.2 研究方法

所有患者入院时均接受常规检查,髋部正侧位X线片确诊为股骨颈骨折。手术前积极治疗并发症:伴有高血压的患者应将血压控制在140-150/90-95 mmHg;合并糖尿病的患者空腹血糖应 <8.0 mmol/L;合并呼吸系统疾病的患者,术前 $PO_2>60$ mmHg, $PCO_2<45$ mmHg, $FVT1<70\%$ 。对患者麻醉耐受进行术前评估,以降低手术风险。所有患者采用蛛网膜下腔阻滞或连续硬脊膜外阻滞的麻醉方式,取侧卧位,麻醉诱导后充分暴露骨折部位,采用髋关节后外侧入路的手术入路方式,以使髋关节的关节囊充分的暴露,便于手术。对两组患者分别行

全髋关节置换术和人工股骨头置换术。其中,对照组患者采用骨水泥型双极人工股骨头,而观察组患者采用生物型全髋假体。术后使患肢外展 15° ,给予3天左右的抗生素治疗,预防感染;术后住院期间,皮下注射低分子量肝素钙注射液3075 u,1次/日,出院后口服抗凝药物,共抗凝治疗六周。

1.3 评价指标

观察并比较两组患者的手术时间、术中出血量、血压及术后引流量等。术后对所有患者进行随访,记录并发症的发生情况。采用Harris评分标准对髋关节功能进行评定,满分为100分,评分 ≥ 90 为优,80-89为良,70-79为中, <70 为差。优良率=(优+良)/总例数 $\times 100\%$ 。

1.4 统计学处理

采用SPSS 17.0统计软件对数据进行分析处理,计数资料用 χ^2 检验,计量资料用均数 $\pm$ 标准差($\bar{X} \pm S$)表示,组间比较采用t检验, $P<0.05$ 表示差异有统计学意义。

2 结果

2.1 两组患者的手术情况比较

如表1所示,观察组手术时间、出血量及收缩压均显著高于对照组,差异具有统计学意义($P<0.05$)。两组患者术后引流量比较,无显著差异($P>0.05$)。

表1 两组手术的基本情况比较($\bar{X} \pm S$)

Table 1 Comparison of the operation situations between two groups($\bar{X} \pm S$)

Group	Case(n)	Operation time(min)	Blood loss(ml)	SBP(mmHg)	Hydrops(mL)
Observation	41	$113.16 \pm 19.23^*$	$432.41 \pm 32.27^*$	$136.85 \pm 37.61^*$	103.94 ± 49.43
Control	41	75.23 ± 9.77	213.65 ± 28.47	123.12 ± 29.28	97.28 ± 35.74
T		7.132	6.835	7.951	3.172
P		<0.05	<0.05	<0.05	>0.05

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

2.2 两组患者术后髋关节功能评分比较

采用Harris评分对患者的髋关节功能进行评定,观察组总

优良率及评分均显著优于对照组,差异有统计学意义($P<0.05$),详见表2。

表2 两组术后髋关节功能评定($\bar{X} \pm S$)

Table 2 Harris score of patients in the two groups($\bar{X} \pm S$)

Group	Case(n)	Excellent	Better	Good	Invalid	Rate(%)	Harris score
Observation	41	17	19	4	1	87.85*	$93.25 \pm 4.51^*$
Conttrol	41	11	20	6	4	75.62	82.76 ± 3.82
X ² /T		-	-	-	-	5.173	5.981
P		-	-	-	-	<0.05	<0.05

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

2.3 两组术后并发症的发生情况

观察组患者术后发生肺部感染5例,深静脉血栓2例,关节脱位2例,并发症的发生率为21.95%;对照组患者术后发生肺部感染6例,深静脉血栓1例,髋臼磨损伴髋痛1例,关节脱位1例,并发症的发生率为24.39%,两组比较,差异无统计学

意义($P>0.05$)。

3 讨论

股骨颈骨折多发生于老年人,近年来发病率呈现出日渐增高和多发的趋势^[9]。造成老年人发生骨折的基本因素主要有两

个,一为年龄增长导致骨质疏松,骨强度下降;二为老年人髋周肌群退变同时反应迟钝,生活中不能有效抵消髋部有害应力,故对老年人而言,不需多大暴力即会导致骨折^[10,11]。对于青壮年股骨颈骨折的患者而言,往往是因受到严重损伤如车祸或高处跌落致伤。

目前,对于此疾病的主要治疗方法分为手术治疗和非手术治疗,而手术治疗已成为比较有效且可靠的治疗方式^[12]。全髋关节置换术中应用的全髋关节是由人工髋臼和人工股骨头两部分组成的。随着科技的进步,现今应用的髋臼的主要材料为超高分子聚乙烯制成,人工股骨头是由高强度模量金属制成的。人工股骨头置换术中应用的人工股骨头种类较多,应用的材料也在不断的改进。临床中常用的是 Moore 型,因其在临床中可保留充足股骨距,植骨可在柄孔中,有利于防止术后假体下沉和松动,故临床较常用^[13-15]。但两者在临床应用中,均存在一定的并发症,全髋关节置换术的并发症主要包括:人工股骨头置换并发症发生,人工髋臼松动、脱位或者发生负重区超高分子聚乙烯面磨损后引发局部反应等不良反应^[16-18]。而人工股骨头置换虽然具有术后关节活动较好,下床较早的优点,但并发症较多,主要包括:感染的发生,脱位、松动或假体柄折断的发生,且处理较困难^[19,20]。因此,在选择使用人工半关节置换时,应严格掌握适应证。

本研究中,全髋关节置换术组的患者手术平均时间、术中出血量、术中收缩压等各指标均明显高于对照组($P<0.05$),说明全髋关节置换术在临床应用时需严格选择适宜人群,对体质较弱及不耐手术的患者应尽量避免使用。髋关节置换术后患者髋关节功能评分和优良率显著优于对照组($P<0.05$),结果说明髋关节置换术能有效改善患者的髋关节功能水平。两组患者术后均出现不同程度的并发症,提示我们应采取适当治疗积极预防并发症的发生,从而减轻患者痛苦,提高临床疗效。

综上所述,对于股骨颈骨折的老年患者而言,上述两种手术方式均可有效的对其进行治疗。全髋关节置换术后髋关节功能恢复较好,人工股骨头置换术后髋关节功能恢复不理想,适合生存预期较短、身体弱、对髋关节功能要求不高的老年患者采用。

参考文献(References)

- [1] 邓建龙,王剑敏,张茗慧,等.快捷小切口与常规切口人工髋关节置换治疗老年股骨颈骨折的对比观察[J].现代生物医学进展,2013,13(23):4473-4476
Deng Jian-long, Wang Jian-min, Zhang Ming-hui, et al. Contrast Observation on Fast and Small Incision with Conventional Incision Artificial Hip Replacement for Treatment of Senile Femoral Neck Fracture [J]. Progress in Modern Biomedicine, 2013, 13 (23): 4473-4476
- [2] Odri GA, Padiolleau GB, Gouin FT. Oversized Cups as a Major Risk Factor of Postoperative Pain After Total Hip Arthroplasty [J]. Arthroplasty, 2013, 5: 883-5403
- [3] Carroll C, Stevenson M, Scope A, et al. Hemiarthroplasty and total hip arthroplasty for treating primary intracapsular fracture of the hip: a systematic review and cost-effectiveness analysis [J]. Health Technol Assess, 2011, 15(36): 1-74
- [4] Takigami I, Ohnishi K, Ito Y, et al. Acetabular perforation after medial migration of the helical blade through the femoral head after treatment of an unstable trochanteric fracture with proximal femoral nail antirotation (PFNA): a case report[J]. J Orthop Trauma, 2011, 25

- (9): e86-e89
- [5] Friedrich MJ, Gravius S, Schmolders J, et al. Biological acetabular defect reconstruction in revision hip arthroplasty using impaction bone grafting and an acetabular reconstruction ring [J]. Oper Orthop Traumatol, 2014, 26(2): 126-140
- [6] Robbins CE, Casey D, Bono JV, et al. A multidisciplinary total hip arthroplasty protocol with accelerated postoperative rehabilitation: does the patient benefit?[J]. Am J Orthop (Belle Mead NJ), 2014, 43 (4): 178-181
- [7] Unver B, Kahraman T, Kalkan S, et al. Reliability of the six-minute walk test after total hip arthroplasty[J]. Hip Int, 2013, 6: 5301
- [8] Fisher KA, Fisher DA. Total hip and knee replacement in a patient with arthrogryposis multiplex congenita[J]. Am J Orthop (Belle Mead NJ), 2014, 43(4): E79-82
- [9] Fujita K, Makimoto K, Tanaka R, et al. Prospective study of physical activity and quality of life in Japanese women undergoing total hip arthroplasty[J]. J Orthop Sci, 2013, 18(1): 45-53
- [10] Cherian JJ, Kapadia BH, Banerjee S, et al. Surgical Intra-operative Blood Management Strategies for Total Hip Arthroplasty [J]. Surg Technol Int, 2014, 24: 319-325
- [11] Wang Z, Anderson FA Jr, Ward M, et al. Surgical Site Infections and Other Postoperative Complications following Prophylactic Anticoagulation in Total Joint Arthroplasty [J]. PLoS One, 2014, 9, 9 (4): e91755
- [12] Chen JH, Kuo FC, Wang JW. Total knee arthroplasty in patients with dialysis: Early complications and mortality[J]. Biomed J, 2014, 37(2): 84-89
- [13] Robinson PM, Obi N, Harrison T, et al. Changing transfusion practice in total hip arthroplasty: observational study of the reduction of blood use over 6 years[J]. Orthopedics, 2012, 35(11): 1586-1591
- [14] Mazoochian F, Schmidutz F, Fottner A, et al. Modified mini-Hardinge access for hip prosthesis implantation in the supine position [J]. Oper Orthop Traumatol, 2014, 26(2): 171-183
- [15] Feyen H, Shimmin AJ. Is the length of the femoral component important in primary total hip replacement? [J]. Bone Joint J, 2014, 96-B(4): 442-448
- [16] Johansson T. Internal Fixation Compared with Total Hip Replacement for Displaced Femoral Neck Fractures: A Minimum Fifteen-Year Follow-up Study of a Previously Reported Randomized Trial[J]. J Bone Joint Surg Am, 2014, 96(6): e46
- [17] Jouffroy, Bone and Joint Trauma Study Group (GETRAUM). Indications and technical challenges of total hip arthroplasty in the elderly after acetabular fracture[J]. Orthop Traumatol Surg Res, 2014, 100(2): 193-197
- [18] Gombá r C, Horvath G, Gá lity H, et al. Comparison of minor bleeding complications using dabigatran or enoxaparin after cemented total hip arthroplasty [J]. Arch Orthop Trauma Surg, 2014, 134(4): 449-457
- [19] Bou Monsef J, Figgie MP, Mayman D, et al. Targeted pre-operative autologous blood donation: a prospective study of two thousand and three hundred and fifty total hip arthroplasties[J]. Int Orthop, 2014, 11 [Epub ahead of print]
- [20] Liu SS, Buvarandran A, Rathmell JP, et al. Predictors for moderate to severe acute postoperative pain after total hip and knee replacement [J]. Int Orthop, 2012, 36(11): 2261-2267