

高龄股骨粗隆间骨折治疗方法的选择

唐吉平¹, 蒋顺琬¹, 曾强¹, 罗强²

(1. 深圳市罗湖区中医院骨科, 广东 深圳 518001; 2. 成都第一骨科医院)

【摘要】 目的: 探讨治疗高龄股骨粗隆间骨折的方法选择。方法: 1997 年 6 月 - 2003 年 5 月治疗高龄股骨粗隆间骨折 115 例, 男 48 例, 女 67 例; 年龄 62~90 岁, 平均 76.1 岁。按 Evan 分型: I 型 22 例, II 型 24 例, III 型 34 例, IV 型 27 例, V 型 8 例。采用骨牵引 15 例, 多枚折尾钉固定 32 例, 动力髁螺钉内固定 47 例。结果: 经 12~34 个月(平均 22 个月)的随访, 共有 94 例获完整随访资料。所有病例均骨折愈合, 依据疗效标准: 骨牵引组(A 组)优 2 例, 良 6 例, 可 5 例, 差 2 例; 多枚折尾钉组(B 组)优 11 例, 良 17 例, 可 4 例; 动力髁螺钉组(C 组)优 18 例, 良 22 例, 可 6 例, 差 1 例。A 组优良率明显低于 B 组($\chi^2 = 4.881$)和 C 组($\chi^2 = 4.875$), 差异有显著性意义($P < 0.05$); B 组和 C 组疗效差异无显著性($\chi^2 = 0.352, P > 0.05$); 功能恢复时间 A 组长于 B 组($F = 213.422$)和 C 组($F = 260.809$), 有显著性差异($P < 0.05$), B、C 组间无显著性差异($F = 1.427, P > 0.05$); A、B、C 三组分别有 6、2 和 4 例发生髋内翻, A 组显著高于 B、C 两组($\chi^2 = 6.020, 6.170, P < 0.05$), B、C 两组间无显著性差异($\chi^2 = 0, P > 0.05$)。结论: 及时有效的内固定是治疗高龄股骨粗隆间骨折的基本原则。Evan I、II 型骨折以多枚折尾钉内固定为首选, Evan III、IV、V 型(逆粗隆间骨折)以动力髁螺钉为最佳, 骨牵引治疗效果明显低于内固定者。

【关键词】 转子间骨折; 牵引术; 骨折固定术, 内

The selection of therapeutical methods for treating intertrochanteric fracture of femur in aged patients

TANG Jiping*, JIANG Shunwan, ZENG Qiang, LUO Qiang.* Department of Orthopaedics, Luohu Hospital of Traditional Chinese Medicine of Shenzhen, Shenzhen 518001, Guangdong, China

ABSTRACT Objective: To investigate the selection of therapeutical methods for treating the intertrochanteric fracture of femur in aged patients. **Methods:** From June 1997 to May 2003, 115 aged patients (48 male and 67 female with average age of 76.1 years ranging from 62 to 90 years) with intertrochanter fracture of femur were treated. According to Evans classification: 22, 24, 34, 27 and 8 cases were classified into type I, type II, type III, type IV and type V of intertrochanter fracture of femur respectively. Fifteen patients were treated by bone traction, 32 patients by fixation with several broken caudal screws and 47 patients by internal fixation with the dynamic hip screw (DHS) respectively. **Results:** After following up for 12 to 34 months(average 22 months), the complete data were collected in 94 patients. All the patients were healed. According to the standard for evaluation of curative effect, in group A treated by bone traction the results were excellent in 2 cases, good in 6 cases, fair in 5 cases and poor in 2 cases; in group B treated by broken caudal, they were excellent in 11 cases, good in 17 cases and fair in 4 cases; while in group C treated by DHS, the results were excellent in 18 cases, good in 22 cases, fair in 6 cases and poor in 1 cases. The rate of excellent and good in group A was significantly lower than group B($\chi^2 = 4.875$) and C($\chi^2 = 4.881$) ($P < 0.05$ respectively). There were no significant difference between group B and C($\chi^2 = 0.352, P > 0.05$). The time course of functional recovery in group A was significantly longer than group B($F = 213.422, P < 0.05$) and C($F = 260.809, P < 0.05$). No significant difference was found between group B and C($F = 1.427, P > 0.05$). The hip inversion occurred in 6 cases in group A, 2 in group B and 4 in group C respectively. Clearly the incidences of the hip inversion in group A was obviously higher than group B($\chi^2 = 6.020, P < 0.05$) and C($6.170, P < 0.05$). There was no significant difference between group B and C($\chi^2 = 0, P > 0.05$). **Conclusion:** Betimes internal fixation was the basic principle for treating the intertrochanteric fracture of femur in aged patients. The

best way for treating patients with type I and II of intertrochanteric fracture of femur is fixation with several broken caudal screws. For the treatment of type III, IV and V of intertrochanteric fracture of femur the DHS fixation is best one. The curative effect of internal fixation is better than that achieved by bone traction.

Key words Intertrochanteric fracture; Traction; Fracture fixation, internal

1997年6月-2003年7月我科共收治高龄股骨粗隆间骨折115例,根据骨折类型及患者意愿,分别采用骨牵引、多枚折尾钉内固定及动力髌螺钉(DHS)内固定等方法治疗,疗效满意。现将随访资料完整的94例报告如下。

1 临床资料

本组94例,男39例,女55例;年龄62~87岁,平均74.6岁;骨折根据Evan分型:I型17例,II型23例,III型29例,IV型20例,V型5例。按治疗方法分组:骨牵引组(A组)15例,多枚折尾钉内固定组(B组)32例,动力髌螺钉内固定组(C组)47例。三组患者性别、年龄等一般情况经统计处理,差异无显著性($P > 0.05$),具有可比性。

2 治疗方法

2.1 骨牵引 对不愿接受内固定治疗者,将伤肢置于托马氏架上,行股骨髁上牵引,重量为体重的 $1/7 \sim 1/8$,保持伤肢外展屈髋屈膝中立位。前4周每周摄床边X线片1次,视骨折对位对线情况,调整牵引重量和方向。后每月摄片1次,待骨折对位对线良好、髓内翻已彻底纠正、骨折线模糊后可适当减轻重量,骨折完全愈合后下床逐步负重行走。在牵引期间嘱患者作股四头肌等长收缩,踝、膝关节活动,抬高臀部等锻炼,每日按摩伤肢,以预防深静脉栓塞。

2.2 闭合复位多枚折尾钉内固定 对Evan I、II型骨折者,勿须牵引,尽早在全麻下手术。助手用力牵引,保持伤肢外展中立位。术者分别于大粗隆顶点下6、8、10、12 cm进针(4个进针点在股外侧呈菱形排列),经股外侧骨皮质、股骨颈向股骨头钻入4枚直径2.5 mm克氏针,并使各针在股骨头颈中呈前后交叉分布,针头位于股骨头软骨下0.5 cm。C形臂X线下了解针位,不满意者可拔出重新进针。再分别以各进针点为中心作直切口,长约1.5~2.0 cm,开孔器顺克氏针套入,剥离皮下筋膜及肌肉直达骨髓,测深后,逐一扩孔、上钉。完毕后,在C形臂X线下活动患髋,了解骨折对位及稳定情况,满意后缝合各切口。术后置伤肢于外展中立位,作股四头肌等长收缩及踝关节活动,1周后开始作髌膝屈伸锻炼,

3周后扶双拐下地作伤肢不负重行走,后根据X线片情况,逐步负重。

2.3 动力髌螺钉(DHS)内固定 Evan III、IV、V型骨折,骨折移位明显(见图1,2),先行胫骨结节牵引,重量为体重的 $1/7 \sim 1/8$,待骨折基本复位后即在连续硬膜外麻醉下手术。患者仰卧于手术床上,患髋垫高约 20° 。取股骨上端前外侧直切口,显露股骨外侧。若骨折对位不满意,则需显露骨折端,直视下将骨折复位。按DHS操作程序行骨折内固定(见图3,4)。完毕后活动患髋,于C形臂X线下了解动力髌螺钉位置及骨折对位对线情况。生理盐水加庆大霉素 16×10^4 U反复冲洗切口,彻底止血,安放负压引流管,逐层缝合。术后定期摄X线片(见图5,6),其他处理同2.2。

3 结果

经12~34个月,平均22个月的随访,94例均骨折愈合。数据经SPSS软件处理,计数资料用 χ^2 检验,计量资料用 F 检验, $P < 0.05$ 为差异有显著性意义。在骨折愈合时间上,A、B、C三组分别为(111.3 ± 18.9)、(97.4 ± 11.0)、(104.8 ± 13.8) d,各组间差异无显著性($P > 0.05$)。在功能恢复时间上:A、B、C三组分别为(156.2 ± 14.15)、(105.1 ± 12.45)、(96.6 ± 13.00) d,A组明显长于B组($F = 213.422$)和C组($F = 260.809$),差异有显著性意义($P < 0.05$);B组与C组间无显著性差异($F = 1.427, P > 0.05$)。A、B、C三组分别有6、2和4例发生髓内翻,其发生率分别为40%、6.25%、8.51%,A组显著高于B组($\chi^2 = 6.020$)和C组($\chi^2 = 6.170$),差异有显著性意义($P < 0.05$);B、C两组间无显著性差异($\chi^2 = 0, P > 0.05$)。按傅捷等^[1]的疗效标准评定:A组中优2例,良6例,可5例,差2例;B组中优11例,良17例,可4例;C组中优18例,良22例,可6例,差1例。其优良率分别为60%、87.5%、85.1%,A组明显低于B组($\chi^2 = 4.881$)和C组($\chi^2 = 4.875$),差异有显著性意义($P < 0.05$);B组和C组间疗效差异无显著性($\chi^2 = 0.352, P > 0.05$)。

4 讨论

4.1 高龄股骨粗隆间骨折治疗方法的选择 本着

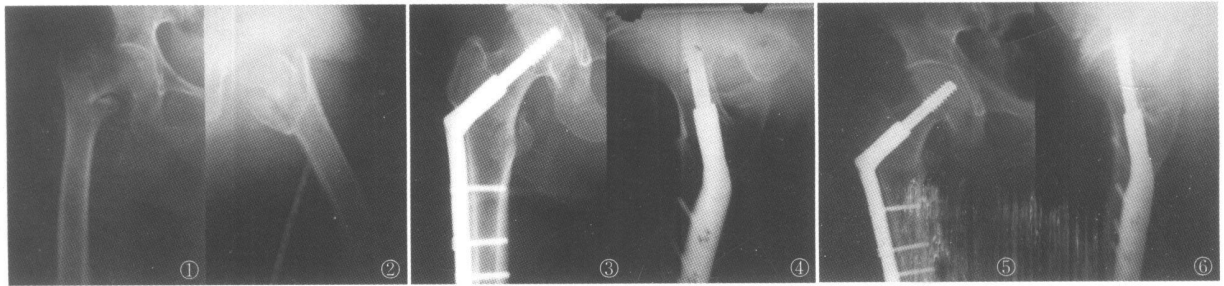


图1 女,78岁,股骨粗隆间骨折 ①术前正位X线片示股骨粗隆间骨折,远折段向上移位,髋内翻,小粗隆骨折,属Evan III型骨折;②术前侧位X线片示股骨粗隆间骨折移位明显,股骨头向后倾斜;③术后1周正位X线片示骨折经内固定后,对位良好,颈干角恢复正常,骨折线清晰可见;④术后1周侧位X线片示股骨头向后倾斜纠正,骨折固定良好,钉位满意;⑤术后3个月正位X线片示骨折线消失,颈干角正常,小粗隆稍向上移位,骨折基本愈合;⑥术后3个月侧位X线片示骨痂生长良好,骨折线基本消失,骨折临床愈合

Fig.1 A 78-year-old woman with the intertrochanteric fracture of femur ①An anterior x-ray film showing a type III of intertrochanteric fracture with the distal segment displaced upwards and hip inversion before surgery; ②A lateral x-ray film showing preoperatively the intertrochanteric fracture with obvious displacement and retroversion of the femur head; ③An anterior x-ray film taken 1 week after DHS fixation, showing a good paratope of fracture, a recovered neck-stem angle and a clear fracture line; ④A lateral x-ray film taken 1 week after DHS fixation, showing a corrected declination of femur head and a satisfied position of DHS; ⑤An anterior x-ray film taken three months after fixation, showing a disappearance of fracture line, a normalized neck-stem angle, a small upward displacement of trochanter and a healed fracture; ⑥A lateral x-ray film taken three months after operation, showing a well-grown callus, a disappearance of fracture line and clinically healed fracture

确保安全、有限手术的原则,视骨折类型选用不同的内固定方式。对Evan I、II型稳定性骨折,采用多枚折尾钉内固定的方法,该方法的优点有:①局麻下手术,对心肺功能的干扰减小;②操作简便,切口小,减少了对机体的打击;③采用多点、多平面固定,牢固可靠,抗剪切、旋转能力强,能早期下床活动,能有效防止髋内翻的发生;④折尾钉尖端有松质骨螺纹,尾端有螺母,不但能有效避免退钉、陷钉等并发症,而且还能使骨折端加压,更有利于骨折的稳定和愈合。Evan III、IV型和逆粗隆间骨折属不稳定性骨折,小粗隆常有明显移位,易发生髋内翻畸形。在治疗上,要求内固定坚强有力,能有效抵抗骨折端的剪切应力,应以DHS为首选。DHS治疗股骨粗隆间骨折近年多有报道,认为它具有结构坚固及动、静加压作用,患者可早期下床活动等优点^[2],骨牵引治疗存在髋内翻和内科并发症发生率高缺点,其疗效远低于内固定者,是不得已而采取的姑息疗法,不值得提倡。

4.2 并发症的预防 原有内科疾病的潜在危险是本病最主要、最严重的并发症,因此在牵引期间,除

鼓励患者作伤肢肌肉等长收缩,关节活动,从远心端向近心端按摩伤肢外,还可视机应用抗凝药物,以预防静脉血栓的形成,同时还应积极防治原有内科疾病。髋内翻是股骨粗隆间骨折本身导致的最常见的并发症,发生原因除小转子严重移位,未能复位外^[3],还和伤肢负重过早有关。而对小转子移位严重的Evan III、IV型骨折,要将移位的小转子良好复位往往是困难的,我们认为不必强求小转子的复位,那种加大外侧切口或在内侧新开切口而企图将小转子复位的方法,是弊多利少的。晚负重是预防髋内翻的重要措施。

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