

人工假体用于髋部疾患随访分析

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我们自 1982~1992 年,用人工假体治疗髋部疾患 108 例,共 112 髋,现将治疗情况、随访结果、及并发症的原因与防治报告如下。

临床资料

1. 一般资料:108 例中,男 46 例,女 62 例;年龄 42~74 岁;左侧 49 例,右侧 55 例,双侧 4 例,共 112 髋。术前髋部疾患及假体类型:股骨头无菌坏死 23 髋,用人工假头 13 个,人工全髋 10 个;新鲜股骨颈骨折(头下型)20 髋,全部采用人工假头;陈旧性股骨颈骨折 42 髋,用人工假头 37 个,人工全髋 5 个;类风湿关节炎 17 髋,用人工假头 11 个,人工全髋 6 个,股骨粗隆部肿瘤 2 髋,均用人工假头,有 4 例为双髋同时患病,共 8 髋,年龄均在 55 岁以上,其中双侧股骨头无菌坏死 2 例、类风湿关节炎 2 例,均采用一侧人工假头,另一侧人工全髋置换。髋臼损伤轻或无损伤者采用人工假头,否则采用人工全髋。

2. 远期随访效果:参照吴氏^[1]人工髋关节疗效标准,本组 108 例共 112 髋,以 2~10 年(平均 6.8 年)随访,优良 54 髋,很好 29 髋,好 10 髋,尚可 13 髋,差 4 髋,很差 2 髋,疗效满意率约 74.1%。

3. 术中及术后并发症 术中操作不当的并发症:股骨矩过短或未留 16 例,粗隆间及其附近劈裂骨折 8 例,股骨干骨折 5 例,假体柄穿出骨干 8 例。

4. 术后并发症:感染 5 例,假体脱臼 4 例,臼杯松动、移位 3 例,假体下沉 10 例,假体松动 3 例,髋臼磨损及创伤性关节炎 4 例,下肢血栓性静脉炎 2 例,脑部脂肪栓塞 2 例,关节僵硬及臀肌无力 3 例,疼痛 4 例,异位骨化 6 例。

讨 论

1. 造成并发症常见原因及处理办法

(1) 术中不当并发症:

①股骨矩过短或未留 16 例。由术中操作时,修剪小粗隆上方的骨组织过多所致。旨在使人工假体柄能够更快、更顺利地插入。如此可导致继发性假体松动、下沉、髋内翻及髋关节半脱位。在假体托内下缘与髓腔周围骨质接触处适当植骨及填入骨水泥,可增加其稳定性,减少并发症的发生。

②粗隆间周围劈裂骨折及假体柄部穿透后侧皮质 16 例。一则是股骨上端髓腔扩大不足,或扩大后不符合假体柄部形状,在插入假体时又用力过猛,将粗隆周围骨质打劈;二则是没有把握好扩大器与髓腔纵平行的角度,致使扩大器沿大粗隆后壁穿出股骨后下方,插入假体时也顺其前孔而行。经重新垫高臀部,下压患膝,充分压低扩大器柄部,小心地沿着髓腔扩大后,再插入假体,同时加用骨水泥,劈裂处钢丝捆绑,手术成功。

③股骨干骨折 5 例。3 例术前为陈旧性股骨颈骨折,因长期卧床,制动导致股骨上段骨质脱钙、疏松现象明显,轻轻击入假体即导致骨折;1 例属髓腔扩大不充分,同时合并骨质疏松,击入假体时劈裂骨折;1 例为儿麻后遗症患者,骨干及髓腔均变细小,预先未定做假头,术中仍使用一般假体,以致股骨劈裂。前 4 例经钢丝捆绑,加用骨水泥,复位成功;后 1 例改为 Batchlor 氏手术,5 例患者术后均满意。

(2) 术后并发症:

①术后感染 5 例。1 例为陈旧性股骨颈骨折,2 枚螺纹钉固定 8 个月者。入院时螺钉已退离骨折线以远,骨折移位不愈。术前未先拔出螺钉及做骨牵引,于本次手术时在 S—P 切口内先拔出螺纹钉,再行假体置换。这样外侧软组织剥离太广泛,出血量增多,病人血压波动较大,手术暂停次数过多,操作时间延长,感染机会明显增加。另 1 例为术前只准备一只假头,又误将双极假头的塑料帽于高压下消毒,术中未及时发现,结果于充分暴露,修剪骨组织及髓腔扩大后,才发现塑料帽因受热膨胀变形,而不易套入金属帽内。用手术刀、骨锉等修整后,方能套入。这样即增加了感染机会。此 2 例病人均为深部感染,前者经换药,拆线、穿刺、使用敏感抗生素及内服外敷中药 43 天后,感染得到控制,术后 7 周开始活动,日后关节稍有僵硬及活动后疼痛。后者经消炎无效,再次切取出人工假头,清除感染灶,使用皮牵引及抗生素后,渐渐愈合,半年后改为 Batchlor 氏手术,效果良好。余 3 例感染均较前 2 例轻,且部位浅,均在术后 6~18 天(平均 13 天)出现症状,主要表现为刀口附近蜂窝织炎,体温偏高,局部疼痛。经充分制动,静滴先锋霉素 V 等有效抗生素,平均约

16 天,感染得到控制,2 周后患者手拉床尾绳做仰卧起坐活动。术后平均 6 周扶双拐下地行走,2 年随访,未再复发。

②假体脱位 4 例。2 例术中采用 moor 氏切口,术后 3 天,家属翻身时,不慎将下肢过度内收、内旋,致后脱位。表现为突然剧痛,弹响声,继而不能活动。硬膜外麻下,行屈曲、提伸手法复位成功。1 例术中用 S-P 切口,术后 5 天患髋疼痛不适,在挪动时不慎致前脱位,手法复位成功。1 例为中心性脱位,实属假头过小,髋臼受头的压强过大,而逐渐损坏软骨及软骨下骨板,使其逐渐坏死、吸收、骨折,致假头突破髋臼,进入盆腔。此例于术后 6 年发生。行全髋置换,术中先取髌骨修复髋臼,然后再安置臼杯及假头,手术成功。

③臼杯松动、移位 3 例。纯属臼内软骨去除不够,骨水泥使用不足,臼杯安置未完全符合原髋臼的倾斜度,术后两年出现臼杯歪斜,头臼半脱位。表现为关节疼痛,不稳及摩擦声。经减少活动,对症处理,尚能维持日常生活。

④假体下沉 10 例。下沉范围 0.3~2.6cm,平均 1.2cm。病人表现关节不稳、疼痛及臀肌无力。X 线片示大转子上移,髋内翻。3 例属股骨矩过短或无留者;2 例前倾角过大假体偏外。假体托未能托在股骨矩上;2 例股骨矩骨质疏松;1 例截骨斜面过大,假体过份集中在股骨矩上,引起股骨矩吸收,塌陷;2 例属早期负重过多所致。有学者^[2]认为早期负重是造成骨质吸收,假体下沉不稳和髋痛的重要因素。这 10 例病人经减少活动,对症处理,均能应付日常生活。

⑤假体松动 3 例。1 例为股骨上端骨质疏松明显,术后 2 年即出现松动;1 例继发于术中劈裂骨折后下地过早;1 例为术后脱位者,再次复位继发松动。3 例均未作特殊处理,均能维持日常生活。

⑥髋臼磨损及创伤性关节炎 4 例。经减少活动,中药熏洗、透析,口服消炎、止痛药物后症状缓解。

⑦下肢血栓性静脉炎 2 例。均系年龄偏大,术前有不同程度血管硬化,术后又未作患肢功能锻炼者,均由彩色 B 超确诊。经内服、外敷活络去栓,扩张血管药物后治愈。

⑧脑部脂肪栓塞 2 例。发现后即刻吸氧、静点低分子右旋糖酐、激素及输入全血等,约 36~40 小时病人逐渐清醒,未遗留任何后遗症。

⑨术后疼痛 4 例。2 例系类风湿关节炎及股骨头无菌坏死,术中发现髋臼不太平整,但只用了人工假头,而未用全髋置换,术后 3 个月出现疼痛;1 例系股

骨上端明显骨质疏松。术中未用骨水泥,术后负重过早,2 个月后出现疼痛;1 例无明显原因。这与何天骢^[3]等描述的情况类似。经减少负重,加强功能锻炼,使用中药透析、热敷、理疗及消炎镇痛西药后,症状渐渐缓解。

⑩异位骨化 6 例。患者均有不同程度关节僵硬及疼痛,通过加强关节锻炼、中药熏洗及理疗后,症状缓解。

2. 体会及预防措施

(1) 严格选择手术适用症:对 60 岁以上的股骨颈骨折及 45 岁以上的股骨头坏死患者,均可使用人工假头;髋臼软骨变性、坏死、脱落者改用全髋置换。但严重类风湿关节炎及粗隆部肿瘤者,即使年轻人也适合做假头或全髋置换。

(2) 充分的术前准备:股骨上端骨质疏松明显者,宜首先加强功能锻炼,减轻骨质疏松。关节周围软组织挛缩明显或有骨折上移者,宜先做皮牵或骨牵引,约 2 周后再行手术。若术前股骨颈内遗留有髓内针或螺钉,则先拔除内固定物后牵引 1~2 周,再行二期置换术。术前要依照 X 线测量准备 2~3 枚人工假头,以备术中选用。消毒双极假头时,一定将塑料部分单独浸泡,不能高压消毒。

(3) 术中操作恰当:术中要保留适当的股骨矩(1.0~1.5cm);扩大髓腔时动作要轻柔,顺着原髓腔扩大,不可粗暴乱插,否则易致劈裂骨折、假体柄穿出股骨干以及脂肪栓塞;安插假体时要掌握好前倾角度数,一般为 10°~15°,或在小粗隆前侧 1~1.5cm 处插入^[4]。

(4) 良好的术后护理:术后病人翻身、挪动时,要有医护人员亲自动手进行,注意保护患髋位置,避免造成脱位;使用有效抗生素及早期患肢功能锻炼,以防感染及血栓静脉炎形成。

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Abstract of Original Articles

Surgical treatment of the severe thoraco-lumbar burst fracture *Chen Fen-yong, Song Jian-rong, Lin Jia-jun, et al Union Hospital of Fujian Medical College (350001)*

The authors reported 51 cases of severe thoracolumbar burst fracture treated with surgery. According to Frankel grades, there were 13 cases of grade A, 7 cases of grade B, 14 cases of grade C, 5 cases of grade D and 2 cases of grade 3 in 11 cases, and total laminectomy decompression was done in 30 cases. The recovery rate was 73% in the incomplete paraplegia and 15.4% in complete paraplegia. It was concluded 1. Burst fractures mainly injure the middle column of the spinal cord, and spinal canal decompression as well as internal fixation should be done, if the fragments of vertebra had compressed about 1/3 of the spinal canal and the sagittal diameter of the later was less than 10 mm; 2. Internal fixation should be selected according to the condition and range of the injured vertebra, It is reasonable to choose the internal fixation procedure which can cause less injury of the spinal segment and get good results in reduction and fixation; 3. The recovery rate of the incomplete paraplegia group was significantly higher than that of the complete paraplegia group when surgical treatment was applied.

Key words Thoracolumbar vertebrae Burst fracture Surgical treatment

(Original article on page 3)

The following-up analysis on the patients with artificial hip-prosthesis *Zhai Ming-yu, Zhao Yu-gui, Wang Chun-ping, et al. Zhengzhou Hospital of Orthopaedics, Henan Province (450052)*

108 cases (112 hips), applied with artificial prosthesis have been followed up after operation, for the average years of 6.8. It was discovered that 37 cases of complication (about 33%) were produced due to the unproper operation; 46 cases of post-operational complication (41.1%); and the satisfactory therapeutic effective rate being about 74.1%.

The frequently encountered reasons and treatments of the various kinds of complications were put into stress

to be analysed and discussed in this paper.

KEY WORDS Artificial prosthesis Disease of the hip region

(Original article on page 5)

Study of the effect of intermittent compressive pressure to the osteoblasts in vitro. *Li Ke-xin, Shang Tian-yu, Dong Fu-hui, et al. Institute of Orthopaedics & Traumatology, Chinese Academy of TCM (100700)*

The experiment imitated the physiological changes of the cellular external circumstances, existed during skeletal functional movement, and supplied a intermittent compressive pressure (0.098 MPa, 15 minutes pressure, 15 minutes relax, 2 cycles/one hour, 8 hours/day) to the osteoblasts of experimental groups in vitro. It was discovered that the numbers of osteoblasts and the reaction of alkaline phosphatase in the experimental group were markedly elevated than that of the control groups. The results indicate that the intermittent compressive pressure is able to improve the proliferation and differentiation of the osteoblasts.

KEY WORDS Intermittent compressive pressure Osteoblast in vitro

(Original article on page 7)

Experimental research on the restoration of bone defect with the complex of heterogenous deproteinized bone and the bone morphogenetic protein. *Bai Meng-hai, Ge Bao-feng, Wang Yong, et al. Institute of Orthopaedics & Traumatology, Lanzhou General Hospital of the Military Region (730050)*

The failure of the implantation of the heterogenous deproteinized bone is always due to the intensive immune rejection. A new method for treating heterogenous bone was described in this paper. The bone of calf was deproteinized, i. e. extracted the main antigens and combined with bovine bone morphogenetic protein (BMMP) and then produced a kind of heterogenous deproteinized bone, not only without antigenicity, but also advantageous to the bone formation. Implanting this kinds of bone complex into the artificial defect (2cm) of the radius of Newzeland rabbit, the observation on the recovery with immunological, radioactive, and histological