

• 临床研究 •

肢体恶性骨肿瘤及骨转移癌保肢治疗

李会杰, 张英泽, 扈文海, 韩永台, 胡彤宇, 陈燕
(河北医科大学第三医院骨病科, 河北 石家庄 050051)

【摘要】 目的: 探讨肢体恶性骨肿瘤及转移癌行瘤段切除假体重建的方法及意义。方法: 本组共62例, 男38例, 女24例; 年龄10~72岁, 平均28.4岁。原发肢体恶性骨肿瘤41例, 其中骨肉瘤19例, 骨巨细胞瘤9例, 恶性纤维组织细胞瘤8例, 浆细胞瘤3例, 尤文氏瘤1例, 骨血管内皮瘤1例。骨转移癌21例, 原发病灶分别为: 肺癌9例, 胃癌3例, 肾癌2例, 乳腺癌2例, 甲状腺癌1例, 颌下腺癌1例, 原发灶不明者3例。对62例肢体恶性骨肿瘤及转移癌应用肿瘤段切除并修复重建治疗。方法有: ①瘤段切除人工假体置换术; ②瘤段切除自体腓骨移植术; ③瘤段切除髓内针骨水泥重建术。结果: 术后随访5~42个月, 平均14.2个月, 41例恶性骨肿瘤中, 术后无瘤生存21例, 死亡4例, 7例发生肺转移, 3例发生其他部位转移, 6例局部复发后截肢。37例生存患者患肢功能按Enneking骨肿瘤外科治疗后功能评定标准, 优良率81.1%。21例骨转移癌患者中, 术后存活3个月以上者19例(占90.4%); 术后疼痛消失15例(占71.4%), 其余均有疼痛减轻; 日常生活工作恢复者11例(占52.3%)。结论: 对可施行广泛切除的肢体恶性骨肿瘤患者采用不同方法修复重建, 行保肢治疗, 可在治疗肿瘤的前提下尽量保留肢体功能, 对肢体骨转移癌行合适的保肢手术对提高骨转移癌患者的生存质量有积极意义。

【关键词】 骨瘤; 骨科手术方法; 假体植入; 骨移植

Limb salvage treatment for malignant bone tumor or metastasis bone tumor of extremities LI Hu-rjie, ZHANG Ying-ze, HU Wen-hai, HAN Yong-tai, HU Tong-yu, CHEN Yan. The Third Hospital of Hebei Medical University, Shijiazhuang 050051, Hebei, China

ABSTRACT Objective To explore treating methods and to study therapeutic effects of limb salvage surgery in the patients with malignant bone tumor or metastasis bone tumor of extremities. **Methods** From 1999.12 to 2004.11, 62 patients (male 38, female 24, ranging in age from 10 to 72 years, mean 28.4 years) with malignant bone tumor or metastasis bone tumor of extremities (41 cases were primary and 21 cases were metastasis) were treated with wide margin resection and reconstruction. The treating methods were as follows: ① prosthetic replacement following tumor resection; ② self-grafting of fibula after tumor resection; ③ intramedullary nail with bone cement reconstruction after tumor resection. Forty-one patients were malignant bone tumor, among which 19 patients were osteogenic sarcoma, 9 patients were giant cell tumor of bone, 8 patients were malignant fibrous histiocytoma, 3 patients were plasma cell tumor, 1 patient was Ewing's tumor, and 1 patient was hemangioendothelioma of bone. Other 21 patients were metastatic bone tumor with the primary carcinoma in other organs including lung cancer in 9 patients, stomach cancer in 3 patients, renal carcinoma in 2 patients, mammary cancer in 2 patients, thyroid cancer in 1 patient, carcinoma of submaxillary gland in 1 patient, and not definite in 3 patients.

Results All the patients were followed up from 5 to 42 months with an average of 14.2 months. Among 41 patients with primary malignant bone tumor, 21 patients were survived without recurrence, 4 patients died, 7 patients had metastasized tumor to lung, 3 patients had metastasized tumor to other organs, and 6 patients underwent amputation due to local recurrence. According to Enneking's standard, the function of affected limb was evaluated in 37 survival patients and the excellent and good rate was 81.1%. Among 21 patients with metastasis tumor, 19 patients (90.4%) could live more than 3 months, 15 patients (71.4%) had pain disappeared (other patients had pain relieved after operation), and 11 patients (52.3%) recovered to normal daily life. **Conclusion** Limb salvage treatment method combined with different reconstruction for patients with malignant bone tumor of extremities suitable to be done wide resection is effective to maintain limb function as more as possible, and if this method is used to patients with metastasis bone tumor of extremities, the living quality of patients can be improved.

Key words Osteoma; Orthopaedics operative methods; Prosthesis implantation; Bone transplantation

随着外科技术和影像学、放化疗技术的发展,可在术前明确肿瘤的性质、边界,并在术前进行有效的放化疗,使保肢治疗肢体骨肿瘤成为发展趋势,既可完整切除肿瘤又可保留具有一定功能的肢体,减少患者心理负担,提高生存质量。自1999年12月-2004年11月用3种方法行瘤段切除重建治疗肢体恶性骨肿瘤62例,取得满意效果,报告如下。

1 临床资料

62例肢体骨肿瘤患者,男38例,女24例;年龄10~72岁,平均28.4岁。所有病例均经病理确诊。肿瘤分类:原发肢体恶性骨肿瘤41例,其中骨肉瘤19例,骨巨细胞瘤9例,恶性纤维组织细胞瘤8例,浆细胞瘤3例,尤文氏瘤1例,骨血管内皮瘤1例。Enneking分期:I a期4例,I b期6例,II a期12例,II b期19例。骨转移癌21例,合并病理骨折8例。转移癌的原发灶分别为:肺癌9例,胃癌3例,肾癌2例,乳腺癌2例,甲状腺癌1例,颌下腺癌1例,原发灶不明者3例。病变部位:肱骨18例,股骨29例,

胫骨12例,桡骨3例。

2 治疗方法

所有病例均经术前针吸或切开活检确定诊断,并经MRI确定肿瘤边界,化疗敏感的恶性骨肿瘤术前行辅助化疗2个疗程,化疗后患者疼痛减轻、肿瘤缩小。化疗后2周内行手术,术后2周继续化疗。骨转移瘤依据原发灶行术前术后放化疗。肿瘤切除均行瘤外切除,手术过程未暴露肿瘤组织,并依据MRI显示肿瘤边界3~6cm处截断骨质。

手术重建方法:其中肱骨肿瘤18例,行肱骨近端假体置换10例,全肱骨置换3例(图1),肱骨近端段切骨水泥髓内钉重建5例。股骨肿瘤29例,股骨近端肿瘤行肿瘤段切人工髌关节置换10例,股骨远端肿瘤行肿瘤段切人工膝关节置换15例(图2),股骨中段肿瘤行人工全股骨置换1例(图3),髓内针骨水泥重建3例。胫骨肿瘤12例,胫骨近端肿瘤行肿瘤段切人工膝关节置换8例(图4),中下段肿瘤段切腓骨移植4例(图5)。桡骨远端肿瘤行腓骨头移植3例(图6)。

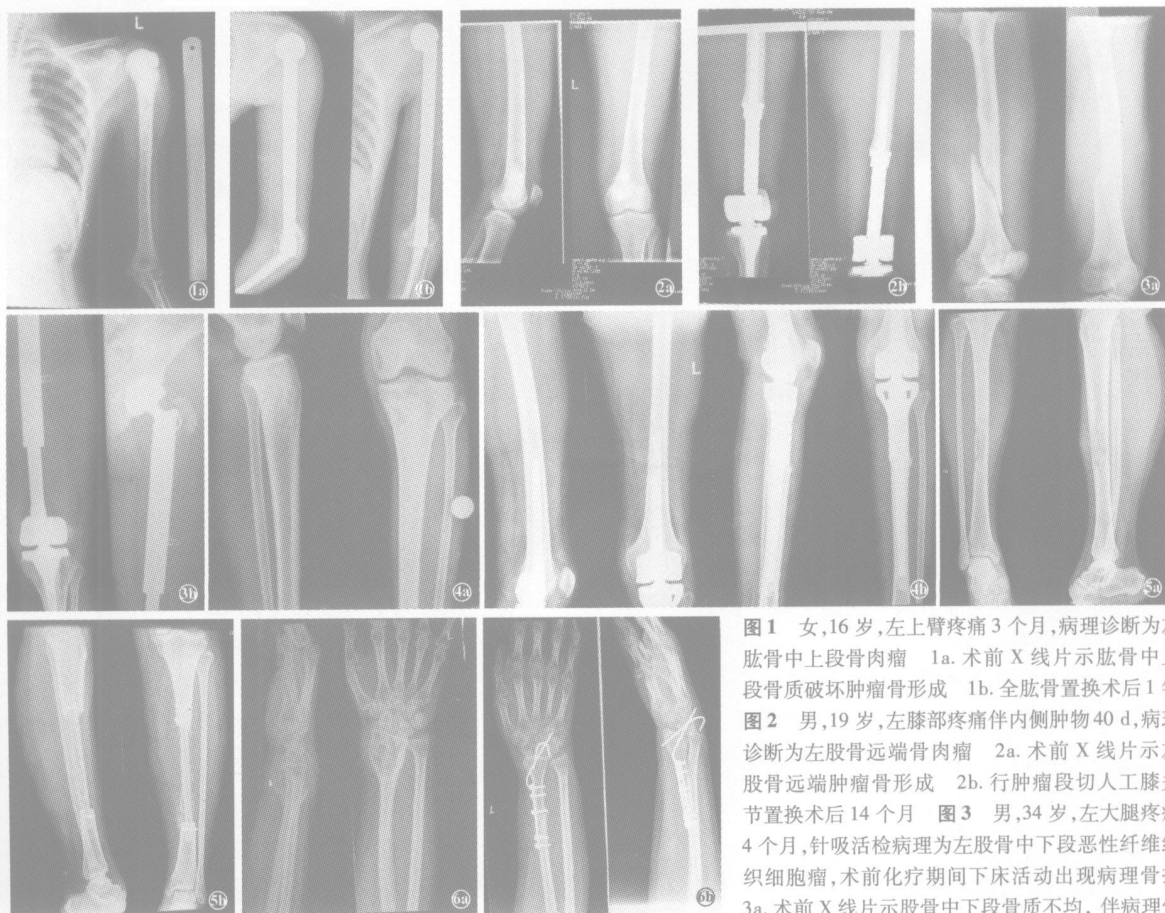


图1 女,16岁,左上臂疼痛3个月,病理诊断为左肱骨中上段骨肉瘤 1a.术前X线片示肱骨中上段骨质破坏肿瘤骨形成 1b.全肱骨置换术后1年
图2 男,19岁,左膝部疼痛伴内侧肿物40d,病理诊断为左股骨远端骨肉瘤 2a.术前X线片示左股骨远端肿瘤骨形成 2b.行肿瘤段切人工膝关节置换术后14个月
图3 男,34岁,左大腿疼痛4个月,针吸活检病理为左股骨中下段恶性纤维组织细胞瘤,术前化疗期间下床活动出现病理骨折 3a.术前X线片示股骨中下段骨质不均,伴病理骨折 3b.行人工全股骨置换术后10个月
图4 男,18岁,左小腿近端内侧疼痛2个月,病理诊断为左胫骨近端骨肉瘤 4a.术前X线片示左胫骨近端骨破坏伴有部分成骨 4b.行肿瘤段切人工膝关节置换术后2年
图5 女,38岁,右小腿疼痛6个月,病理诊断为右胫骨中下段恶性纤维组织细胞瘤 5a.术前X线片示胫骨中段骨质破坏 5b.肿瘤段切并对侧腓骨移植术后4个月
图6 女,42岁,

折 3b.行人工全股骨置换术后10个月 图4 男,18岁,左小腿近端内侧疼痛2个月,病理诊断为左胫骨近端骨肉瘤 4a.术前X线片示左胫骨近端骨破坏伴有部分成骨 4b.行肿瘤段切人工膝关节置换术后2年 图5 女,38岁,右小腿疼痛6个月,病理诊断为右胫骨中下段恶性纤维组织细胞瘤 5a.术前X线片示胫骨中段骨质破坏 5b.肿瘤段切并对侧腓骨移植术后4个月 图6 女,42岁,

左腕部肿物 2年 4个月,病理诊断为左桡骨远端骨巨细胞瘤,发病后 8个月曾行搔刮植骨术,6个月前复发 6a 术前 X线片示左桡骨远端膨胀性骨破坏,皮质菲薄 6b 行肿瘤段切腓骨头移植术后 6个月

Fig. 1 Female 16-year-old, with pain in the left upper arm for 3 months, pathologically diagnosed as osteogenic sarcoma in the middle and upper segment of left humerus 1a Preoperative X-ray showed the osteoclasts and neoplastic bone formation in the middle and upper segment of left humerus 1b One year after total humerus replacement

Fig. 2 Male, 19-year-old with pain in the left knee combined with medial lump for 40 days, pathologically diagnosed as osteogenic sarcoma in the left distal femur 2a Preoperative X-ray showing the neoplastic bone formation in the left distal femur 2b Fourteen months after tumor resection and total knee prosthesis replacement

Fig. 3 Male 34-year-old, with pain in the left thigh for 4 months, pathologically diagnosed as malignant fibrous histiocytoma in the middle and inferior segment of left femur. Motor induced pathologic fracture during chemotherapy before operation 3a Preoperative X-ray showing unevenness sclerotic in the middle and lower femur combined with pathologic fracture 3b Ten months after total femur prosthesis replacement

Fig. 4 Male 18-year-old with pain in the medial proximal side of left leg for 2 months, pathologically diagnosed as osteogenic sarcoma in the proximal end of left tibia 4a Preoperative X-ray showing osteoclasts accompanied with partial osteogenesis in the proximal end of left tibia 4b Two years after tumor resection and total knee prosthesis replacement

Fig. 5 Female, 38-year-old with pain in the right leg for 6 months, pathologically diagnosed as malignant fibrous histiocytoma in the middle and inferior segment of right tibia 5a Preoperative X-ray showing osteoclasts in the middle tibia 5b Four months after tumor resection and grafting of fibula in opposite side

Fig. 6 Female, 42-year-old with lump in the left wrist for 2 years and 4 months, pathologically diagnosed as giant cell tumor of bone in the distal end of left radius, previously treated by scraping and bone grafting operation at 8 months after invasion, and recurred 6 months ago 6a Preoperative X-ray showing distant osteoclasts in the distal end of left radius with thin cortex of bone 6b Six months after tumor resection and grafting of fibular head

3 结果

术后随访 5~ 42个月,平均随访 14.2个月。41例原发肿瘤中,术后无瘤生存 21例。6例局部复发,行根治性截肢术,术后 14个月假体断裂 1例,再次行假体置换;术后 31个月假体骨质连接处骨折 1例,行加长假体置换。4例于术后 12~ 24个月死于肺转移。7例于术后 5~ 18个月发生肺转移,带瘤生存。3例发生其他部位转移,2例转移至脊柱,1例转移至肾脏,带瘤生存。21例转移癌患者中,术后存活 < 3个月 2例, ≥ 3个月且 ≤ 6个月 4例, > 6个月且 ≤ 12个月 6例, > 12个月且 ≤ 18个月 6例, > 18个月且 ≤ 24个月 2例, 30个月 1例,此患者为肾癌患者,已有脑部转移。

术后功能评定:以 Enneking 等^[1]确定的骨肿瘤外科治疗后功能评定系统为标准,评价患肢的功能情况及有无畸形、相应部位的肌力、患者的生活能力及对手术效果的主观评价等 6项因素进行综合评价。本组 37例原发骨肿瘤术后生存患者功能评价,结果为优 11例,良 19例,可 4例,差 3例,优良率 81.1%。

21例骨转移瘤患者中,术后疼痛消失 15例,占 71.4%,其余均有疼痛减轻;术后存活 3个月以上者 19例,占 90.4%;日常生活工作恢复者 11例,占 52.3%。

4 讨论

4.1 原发恶性骨肿瘤保肢治疗 近 20多年来,由于新辅助化疗的开展和手术的进步,恶性骨肿瘤的保肢手术已取代截肢,成为主要的治疗方式。但是,保肢治疗不能任意扩大适应证,必须按照骨肿瘤分期采取相应的治疗^[2,3]。目前公认 Enneking I a

I b及 II a期为较好的适应证, II b期肿瘤也可考虑保肢,尤其对术前化疗敏感者。其适应证为:无全身转移、或仅有孤立且可切除的转移灶,骨肿瘤没有侵犯重要的血管神经组织,肿瘤切除重建时有良好的皮肤及软组织覆盖,保肢治疗后的功能不比相应截肢后假肢功能差。保肢治疗一定要在有效的辅助化疗配合下进行,不能以降低生存率为代价,否则就失去了保肢治疗的意义。禁忌证主要有:术前有不适合或错误的活检,重要的血管神经受侵犯,局部感染,大剂量放疗后局部血供及软组织条件差。本组 41例中术前均由术者行针吸活检,确定诊断后,对 II a II b期肿瘤行术前化疗,对 II a期及化疗反应好的 II b期行保肢治疗。

4.2 肢体转移癌的手术治疗 骨转移癌是中晚期恶性肿瘤的最常见形式,多发生难以控制的骨痛,并伴有功能障碍,甚至发生病理骨折,极大影响患者的生存质量。近年来由于对骨转移癌治疗观念的转变,给予积极治疗,为患者赢得了较好的生存质量^[4]。本组病例经瘤段切除重建术后,疼痛均有明显缓解或消失,明显提高了生活质量,故对于全身情况好、无恶病质及严重合并症,预计生存期大于 3个月的患者应行手术治疗,这样有利于患者的护理和后续治疗,有利于患者的精神心理治疗,并能减轻患者疼痛,以便恢复肢体功能、提高生存质量。

4.3 肢体骨肿瘤段切重建的方法 人工假体置换术是应用最广泛的方法^[5],该方法已较为成熟,可依据患者的术前 X线片定制假体,使用方便,也是本组病例使用最多的重建方式,但有费用昂贵、假体折断及使用年限有限的缺点。自体腓骨移植多用于胫骨

中段肿瘤,本组病例中均达到良好愈合,特别是腓骨头具有关节面,行桡骨远端重建对保留腕关节功能有无可比拟的效果。髓内钉骨水泥重建多用于转移癌及骨干部位肿瘤,可恢复骨干的连续性,并有一定的承重能力,具有手术简单、费用低的优点。文献报道同种异体骨、半关节移植术取得良好效果,具有关节形态适合、关节面良好、有组织附着点、愈合后终生受用的优点,但有发生排异反应、不易愈合的缺点,且需进一步完善骨库增加供体来源,以便提供更加适合的异体骨^[6]。总之,对于肢体的恶性骨肿瘤及转移癌,应在严格选择适应证的基础上行保肢治疗,并尽量保留肢体功能。

参考文献

- 1 Enneking WF, Dunham W, Gebhardt M C A system for the functional evaluation of reconstructive procedure after surgical treatment of tumors of the musculoskeletal system. Clin Orthop, 1993; 286: 241-246.
- 2 胡永成. 全国骨肉瘤保肢座谈会会议纪要. 中华骨科杂志, 2000; 20: 391-392.
- 3 Veth R, van Hoesel R, Pruszyński M, et al Limb salvage in musculoskeletal oncology. Lancet Oncol 2003; 4(6): 343-350.
- 4 张清, 蔡樵伯, 牛晓辉, 等. 长骨骨转移癌外科治疗的随访分析. 中华外科杂志, 2003; 41(2): 134-138.
- 5 叶澄宇, 杨胜武, 滕红林, 等. 人工假体在膝关节周围骨肿瘤保肢治疗中的应用. 中国骨伤, 2004; 17(3): 151-153.
- 6 杨庆铭. 同种异体骨关节移植在骨肿瘤保肢手术中的应用. 中华骨科杂志, 2000; 20(增刊): 53-57.

(收稿日期: 2005-08-09 本文编辑: 连智华)

• 短篇报道 •

针灸配合穴位注射治疗腰椎间盘突出症

黄敏

(贵州省人民医院, 贵州 贵阳 550002)

自2002年1月-2004年1月采用针灸配合穴位注射治疗腰椎间盘突出症(LIDP)取得了较好的临床疗效,现报告如下。

1 临床资料

本组68例,女36例,男32例;年龄28~81岁,平均50.1岁。病程5d~20年。诊断标准:参照《中药新药治疗腰椎间盘突出症的临床研究指导原则(草案)》[中国中医骨伤科杂志,1995,3(5):52]关于LIDP的诊断标准^[1]:①腰痛及沿坐骨神经分布区疼痛,咳嗽、喷嚏或用力诱使疼痛加重;②棘突旁压痛;③直腿抬高试验及加强试验阳性;④小腿及足背皮肤感觉减退;⑤病侧跟腱及膝反射减弱或消失;⑥趾肌力减退;⑦腰部生理曲度改变,可见腰部僵直,生理前凸消失或脊柱侧弯;⑧X线片提示腰椎生理曲度变直或脊柱侧凸,相邻椎边缘有骨赘增大;⑨CT或MR检查有椎间盘突出。其中①、②、③、⑨项为诊断LIDP的必备条件。排除标准:腰椎结核、肿瘤,全身胶原性免疫性疾病及具有明显手术指征的重症患者。主要症状及体征:腰痛,活动受限或伴下肢疼痛,咳嗽或行走时加重,查腰椎棘突旁压痛,多发生L₄₋₅直腿抬高试验及加强试验阳性,CT或MRI提示椎间盘突出。

2 治疗方法

2.1 针灸 以腹针治疗为主。取穴:关元、中脘、气海、水道、水分、气旁、四满、外陵、滑肉门。加减:①急性腰椎间盘突出加入中、印堂;②陈旧性的腰椎间盘突出加气穴;③下肢疼痛加下风湿点、下风湿下点。用30号针,病程长则深刺,病程短则浅刺,留针30min,并用艾架灸神厥穴,10d为1个疗程。

2.2 穴位注射 根据CT或MR检查确定椎间盘突出部位,取双侧对应的夹脊穴。患者取坐位,低头伏案,暴露腰部,用20ml一次性空针,抽取骨肽液4ml(长春长庆药业集团有

限公司,每安瓿2ml含10mg骨肽液,国药准字H2003053)加10%GS16ml常规消毒后,快速深部进针,有酸胀感,并向下肢放射为佳,抽无回血后,迅速推注药物,每穴10ml拔针后局部用手拍打。

3 治疗结果

疗效评定标准:痊愈,腰痛及下肢放射痛症状消失,棘突旁压痛消失,脊柱活动自如,直腿抬高试验大于70°;显效,腰痛明显减轻,下肢放射症状消失,棘突旁压痛消失,脊柱活动有改善,直腿抬高60°~70°,不影响日常生活;有效,腰腿痛症状减轻,能下床直立行走,直腿抬高60°;无效,症状体征无改变。结果:治愈41例,显效13例,好转12例,无效2例。随访20例,1年复发1例,2年复发3例。

4 讨论

腹针是通过在腹部进行针刺调节脏腑、经络以治疗全身疾病的一种针灸方法。腰椎间盘突出症是一种退行性病变,中医辨证多与脾肾不足有关。腹针治疗该病主穴由天地针(中脘、关元)组成。中脘是胃之募穴,脾与胃相表里,有“水谷之海”之称;关元有培肾固本、补气活血之力。两穴合用,具有培补脾肾、强筋壮骨、活血化瘀之功。四满、气海、气旁、气穴可增补肾气;滑肉门、外陵、风湿点用以疏通经气,标本兼顾。

骨肽液含有多种活性肽类,具有调节骨代谢,改善局部血液循环,解除局部肌肉痉挛,抗炎镇痛作用,其葡萄糖具有脱水、消肿的作用。笔者认为通过穴位注射,不仅是药物本身的化学物质刺激作用,更有经络腧穴的刺激作用,达到事半功倍的作用。在治疗期间,宜卧床休息,减少椎间盘承受的压力,使受损的椎间盘纤维组织部分修复。

(收稿日期: 2006-08-07 本文编辑: 李为农)