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小针刀联合中药治疗痰瘀阻络型股骨头坏死骨髓水肿导致急性髋部疼痛的近期疗效观察*

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摘要 目的:观察小针刀联合内服中药治疗痰瘀阻络型股骨头缺血性坏死骨髓水肿导致急性髋部疼痛的近期疗效。**方法:**将 60 例辨证为痰瘀阻络型股骨头缺血性坏死骨髓水肿导致急性髋部疼痛患者随机分为 2 组,每组 30 例。治疗组给予小针刀治疗,对照组给予髓芯减压治疗,两组均联合内服中药治疗。治疗 1 月后,观察和比较两组的临床疗效,治疗前后视觉疼痛模拟(VAS)评分、Harris 评分的变化并对比两组的围术期各项指标。**结果:**治疗后,治疗组总有效率、VAS 评分和 Harris 评分分别为 83.3%、2.85±0.32 分、90.68±4.25 分,对照组总有效率、VAS 评分和 Harris 评分分别为 86.7%、3.28±0.67 分、92.16±5.62 分。两组患者 VAS 评分均显著低于治疗前,髋关节 Harris 功能评分均显著高于治疗前($P<0.05$),但两组之间以上指标比较差异均无统计学意义($P>0.05$)。治疗组的术中出血量、住院时间和治疗费用均显著小于对照组($P<0.05$)。**结论:**小针刀联合内服中药治疗痰瘀阻络型股骨头坏死骨髓水肿导致急性髋部疼痛的近期疗效与髓芯减压联合内服中药治疗相当,但治疗简便、费用便宜。

关键词:股骨头坏死;骨髓水肿;小针刀;临床疗效

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Clinical Observation of Small Needle-knife on the Acute Hip Pain of Bone Marrow Edema on ANFH*

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ABSTRACT Objective: To investigate the effect of small needle-knife on acute hip pain of bone marrow edema on ANFH. **Methods:** 60 cases of Acute Hip Pain of Bone Marrow Edema on ANFH were randomly divided into the treatment group and the control group. The treatment group were treated by small needle-knife. The control group were treated by core compression. After 1 month of treatment, the clinical efficacy of the two groups was observed and compared, the changes of VAS (Visual analogue pain scores) and Harris scores before and after treatment and the perioperative indicators of the two groups were compared. **Results:** After treatment, the total effective rate, VAS scores and Harris scores in the treatment group were 83.3%, 2.85±0.32 and 90.68±4.25, respectively, while the total effective rate, VAS score and Harris score in the control group were 86.7%, 3.28±0.67 and 92.16±5.62, respectively. VAS score of the patients in both groups were significantly lower than that before treatment, and Harris function scores of the hip joint were significantly higher than that before treatment ($P<0.05$), but there were no statistically significant differences in the above indicators between the two groups ($P>0.05$). Intraoperative blood loss, hospitalization time and treatment cost of the treatment group were significantly lower than those of the control group ($P<0.05$). **Conclusion:** The short-term efficacy of small needle-knife combined with internal administration of traditional Chinese medicine in the treatment of acute hip pain caused by femoral head necrosis and bone marrow edema due to phlegm stasis blocking collatudes is comparable to that of core compression combined with internal administration of traditional Chinese medicine, but the treatment is simple and inexpensive.

Key words: ANFH; Bone marrow edema; Small needle-knife; Clinical effect

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前言

股骨头缺血性坏死是由多种因素作用造成的股骨头局部血运破坏,凝血纤溶系统紊乱,引起股骨头结构发生改变,甚至

骨小梁断裂、塌陷、变性,关节功能障碍的一种疾病^[1]。临床上以髋部疼痛、压痛、活动受限、步态跛行、Thomas 征、“4”字试验、Allis 征、Trendelenburg 征阳性为其主要症状及体征,治疗难度大,且致残率高,约 50%的股骨头坏死患者 2-3 年内都会发生

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股骨头变性、塌陷,关节功能障碍^[2]。目前,中医在股骨头缺血性坏死的治疗上积累了一定经验^[3-5],但是股骨头缺血性坏死早期骨髓水肿导致的急性髋部疼痛,具有发病急、疼痛剧烈、患肢活动功能障碍等特点,对患者的生活质量和身心健康造成了严重影响。

骨髓水肿(bone marrow edema, BME)是导致疼痛的最主要原因,主要病理表现为病变组织血管增多、灌注过度、水的外渗作用造成的骨基质水肿、纤维组织增生及炎性细胞浸润^[6]。临床上,股骨头缺血性坏死骨髓水肿导致急性髋部疼痛的患者辨证为瘀瘀阻络型较为常见,虽然有药物、物理、手术等很多治疗方法,但如何选择合适的方法(简、便、效、廉)、尽快缓解疼痛、减轻骨髓水肿、改善关节功能一直是困扰临床医生的问题。中医药对于早中期的患者可延缓疾病发展,有效改善患者的临床症状^[7]。本研究采用小针刀联合内服中药治疗瘀瘀阻络型股骨头缺血性坏死骨髓水肿导致急性髋部疼痛,临床效果显著,现将研究结果做如下详述。

1 资料与方法

1.1 一般资料

选择 2015 年 6 月至 2017 年 6 月在我院诊治的 60 例股骨头缺血性坏死骨髓水肿导致急性髋部疼痛患者为研究对象,包括单侧股骨头坏死 44 例,双侧股骨头坏死 16 例;创伤性股骨头坏死(训练伤)18 例,酒精性股骨头坏死 23 例,激素性股骨头坏死 17 例,无明显原因者 2 例。按照随机数字表法将所有患者分为小针刀治疗组 30 例,对照组 30 例。其中,治疗组男性 18 例,女性 12 例,平均年龄(42.8 ± 3.4)岁,平均病程(2.8 ± 0.5)个月,骨髓水肿分级:1 级 10 例,2 级 14 例,3 级 6 例,ARCO 分期:1 期 1 例,2 期 13 例,3 期 16 例。对照组男性 16 例,女性 14 例,平均年龄(39.2 ± 2.6)岁,平均病程(2.4 ± 0.6)个月,骨髓水肿分级:1 级 8 例,2 级 18 例,3 级 4 例,ARCO 分期:1 期 2 例,2 期 11 例,3 期 17 例。两组一般资料比较差异均无统计学意义($P > 0.05$),具有可比性。

1.2 诊断标准

① 临床症状和两侧髋关节 CT 和 MRI 检查结果符合双侧股骨头坏死的标准;② 参照《中药新药临床研究指导原则》符合瘀瘀阻络型患者:髋部酸痛沉重,关节屈伸不利,形体肥胖,口干不欲饮,舌淡胖,边有齿痕,苔白腻或黄腻,脉弦滑或濡缓^[8];③ 根据 VAS 评分标准中的疼痛评分,髋部疼痛大于 7 分,属中度疼痛及以上患者;④ 根据骨髓水肿 MRI 的诊断标准^[9]确诊为骨髓水肿的患者;⑤ 根据骨髓水肿 MRI 的分级标准^[10];⑥ 根据股骨头坏死国际骨循环学会(ARCO)分期标准^[11]确定股骨头坏死分期。

1.3 纳入与排除标准

纳入标准:① 符合上述诊断标准者;② 同意参加此次研究,对治疗情况患者及其家属均已知晓,签署知情同意书。

排除标准:① 治疗局部或全身感染者;② 凝血机制障碍及有出血倾向者;③ 髋关节结核及化脓性感染;④ 心脑血管严重内科疾病者。

1.4 治疗方法

术前常规进行血常规、凝血常规、肝肾功能以及心电图、胸

片等常规检查,无手术禁忌。两组患者均内服自拟中药化痰祛瘀方(党参 20 g、茯苓 12 g、白术 15 g、陈皮 6 g、法半夏 15 g、白芥子 15 g、胆南星 12 g、蜈蚣 2 g、水蛭 4 g、丹参 15 g、当归 20 g、续断 15 g、牛膝 15 g、骨碎补 20 g、甘草 6 g),水煎服,每次 100 mL,3 次/天。

治疗组:体位:腹股沟部位操作采用平卧位;内收肌部位操作采用仰卧、髋关节外展外旋位;股骨外侧及大粗隆部位操作采用平卧位,髋部垫高 30° 位。标注体表进针点,常规皮肤消毒,铺无菌洞巾,1%利多卡因注射液局部浸润麻醉并达关节囊,如关节腔有积液则先抽出,选用 I 型三号 1 mm 或四号 1 mm 针刀,按照四步进针法进行小针刀治疗(注意避开股神经、股动静脉):1.取腹股沟韧带中点下、外 2 cm 处,垂直刺入髋关节腔,"十"字切开前侧关节囊,行髋关节囊前侧松解;2.行内收肌松解;3.行股骨大粗隆松解;4.行髂胫束与阔筋膜张肌松解。术口创可贴覆盖。每周 1 次,3 次为一疗程。

对照组:患者平卧位,患髋垫高约 45°,硬膜外联合麻醉成功后,常规术野皮肤消毒,铺无菌洞巾,C 臂 X 线机定位、标记,在患侧股骨大粗隆下方约 3 cm 处分别切开约 2 cm 长纵形切口,分离各层组织达骨皮质,透视下从不同方向分别钻入 3 枚直径 2 mm 克氏针作为导针直达股骨头坏死骨髓水肿病灶,用 5 mm 空心钻行钻孔减压,无菌生理盐水冲洗、止血、关闭切口、术口无菌纱布包扎。

1.5 疗效判定与观察指标

疗效判定^[12]:治愈:行走无跛行,髋关节疼痛缓解或基本缓解,下肢无短缩,功能完全或基本恢复;好转:髋关节疼痛症状减轻,活动功能改善,下肢短缩在 1 cm 左右;无效:症状无改善,活动功能障碍,跛行加重。

观察指标:分别在治疗前、治疗 1 月后使用 VAS 疼痛评分、髋关节 Harris 评分评定患者疼痛及关节功能情况。术后观察有无不良反应及并发症。

围术期指标:记录两组患者在治疗过程中的出血量、住院时间和治疗费用。

1.6 统计学分析

收集的数据采用 SPSS18.0 软件进行分析,计量资料和计数资料分别以($\bar{x} \pm s$)和(%)的形式表述,组间比较分别采用 t 检验和 χ^2 检验,以 $P < 0.05$ 为差异具有统计学意义。

2 结果

2.1 两组治疗前后 VAS 评分的比较

治疗后,两组 VAS 评分均显著低于治疗前($P < 0.05$),但两组 VAS 评分比较差异无统计学意义($P > 0.05$)。

2.2 两组治疗前后 Harris 评分的比较

治疗后,两组 Harris 评分均显著低于治疗前($P < 0.05$),但两组 Harris 评分比较差异无统计学意义($P > 0.05$)。

2.3 两组临床有效率的比较

治疗后,治疗组患者的临床总有效率为 83.3%,对照组患者的临床总有效率为 86.7%,两组对比差异无统计学意义($P > 0.05$),见表 3。

2.4 两组围术期指标比较

治疗组的术中出血量,住院时间和治疗费用均显著低于对照组,差异具有统计学意义($P < 0.05$)。

表 1 两组治疗前后 VAS 评分的比较

Table 1 Comparison of the VAS scores between the two groups before and after treatment

Groups	n	Before treatment	After treatment	t	P
Treatment group	30	7.37± 1.28	2.85± 0.32	2.26	<0.05
Control group	30	7.23± 1.49	3.28± 0.67	3.28	<0.05
t		0.963	1.215		
P		>0.05	>0.05		

表 2 两组治疗前后 Harris 评分的比较

Table 2 Comparison of the Harris scores between the two groups before and after treatment

Groups	n	Before treatment	After treatment	t	P
Treatment group	30	75.24± 6.87	90.68± 4.25	9.86	<0.05
Control group	30	78.88± 8.43	92.16± 5.62	12.48	<0.05
t		0.843	5.125		
P		>0.05	>0.05		

表 3 两组临床有效率的比较

Table 3 Comparison of the Clinical efficiency between the two groups

Groups	n	Cure	Improve	Invalid	Total effective rate
Treatment group	30	5	20	5	25(83.3)
Control group	30	4	22	4	26(86.7)

表 4 两组围术期指标比较

Table 4 Comparison of Perioperative Indicators between the two groups

Groups	n	Blood loss(mL)	Hospitalization time(D)	Treatment Expense(¥)
Treatment group	30	2.53± 0.25	3.23± 0.72	2235.12± 465.41
Control group	30	15.45± 2.32	5.23± 1.02	5542.69± 879.24
t		30.237	8.774	18.211
P		<0.05	<0.05	<0.05

2.5 两组术后不良反应及并发症的发生情况

术后,两组患者均未见不良反应及其他并发症。

2.6 典型病例分析

患者王 X X,男,年龄:32 岁,训练伤致左髋部疼痛伴活动受限 4 月,加重 1 周。诊断:左侧股骨头缺血性坏死,VAS 评分 9 分,Harris 评分 73 分,骨髓水肿 MRI 分级 3 级,ARCO 分期 II 期,见图 1-A、B、C。采用小针刀治疗 1 月后 VAS 评分 2 分,Harris 评分 91 分,髋关节已明显缓解,下肢无短缩,功能基本恢复。3 月后患者病情稳定,复查 MRI 提示骨髓水肿 2 级,水肿明显减轻,见图 1-D、E、F。半年后复查 MRI 提示骨髓水肿 0-1 级,水肿基本消退,见图 1-G、H、I。

3 讨论

股骨头缺血性坏死若不进行有效的干预与治疗,绝大多数的患者病情将呈进行性加重,结局往往是不同程度的股骨头塌陷、髋关节功能受限或障碍,而早诊断、早期合理有效的治疗或许是尽可能保存自身关节的最好途径^[13-15]。股骨头缺血性坏死

骨髓水肿导致急性髋部疼痛常见于早期股骨头坏死的 II、III 期患者,MRI 可以确诊,其原因主要是由于坏死面积增大、骨小梁微细骨折、股骨头塌陷,使得骨髓内压力增加,静脉回流出现障碍、渗出液增多,产生炎症反应,导致骨髓水肿的几率和分级显著上升^[16-18],当出现骨髓水肿面积增大或髋部疼痛加重,提示病情出现恶化,反之,治疗的有效性和疾病预后的判断,可以用水肿面积减小和髋部症状缓解来确定^[19-21]。虽然临床治疗首先是减缓症状,其次是促进坏死骨修复、预防股骨头塌陷,最后阻止进一步塌陷,延缓关节破坏的进展^[22-24],但治疗的首要目标仍就是减轻或缓解疼痛,提高生活质量。

小针刀及髓芯减压都是微创治疗股骨头缺血性坏死的方法之一,髓芯减压是比较经典的手术方法,最初被 Ficat 和 Arlet 应用于股骨头坏死的诊断中,通过降低股骨头骨内高压,改善局部血循,促进血管和新骨再生^[25,26],达到缓解疼痛,促进坏死骨修复的目的。小针刀治疗技术对慢性软组织损伤、退行性骨关节疾病以及脊柱相关疾病等疾病的治疗具有独特优势。它具有切、割、削和分离的作用,主要机理为通过闭合性的松解

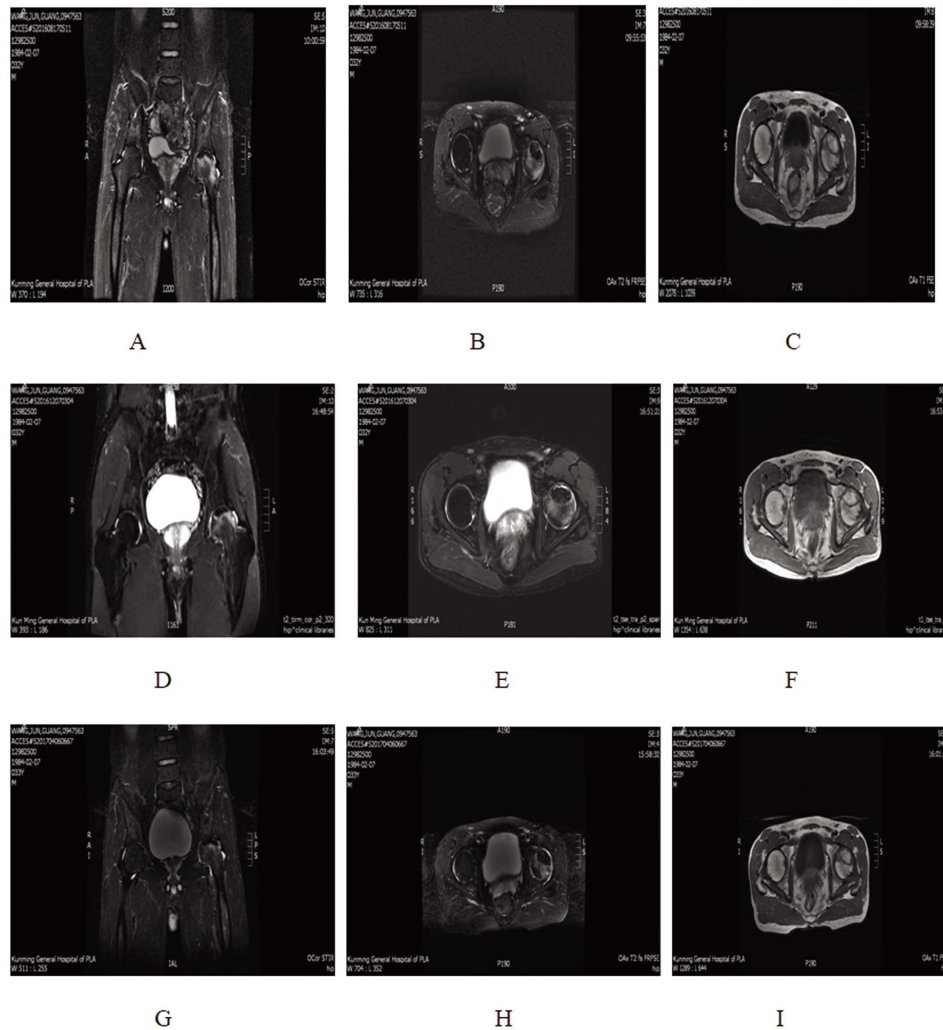


图1 某患者利用小刀针治疗前后的MRI图(A、B、C:手术前,D、E、F:治疗3月后,G、H、I:治疗半年后)

Fig.1 MRI images of a patient before and after treatment with small needle-knife(A, B, C: before surgery, D, E, F: 3 months after surgery, G, H, I: Six months after surgery)

术,将瘢痕切开,使得粘连及挛缩分离、将堵塞疏通,导致病理架构被破坏,最终恢复软组织和骨关节的力学平衡,2010年,股骨头缺血性坏死的针刀治疗技术确定为二类疾病的优势病种^[27,28],已被国家中医药管理局作为基层中医药适宜技术在全国进行推广,针刀治疗股骨头坏死骨髓水肿的作用机制为:①降低关节囊内压;②改善局部血液循环;③具有针灸疏通经络的作用^[29];将髋关节周围痉挛的软组织松解,达到消除局部软组织的病理性紧张,恢复软组织的平衡状态,解除紧张的肌肉对髋关节的拉力,恢复髋关节的力学平衡^[30]。针刀技术具有以下特色优势:①缓解疼痛,改善关节功能作用明显;②痛苦小,局部麻醉下就可完成;③操作简单、方便,不需C臂透视及手术室支持,门诊及基层医院易以推广;④安全有效,无不良反应及不良事件发生;⑤损伤小、出血少;⑥费用低,省去放射、麻醉、手术监护费用;⑦依从性好。痰瘀阻络型患者主要病机为脾胃虚弱、水湿运化失司,痰湿瘀血痹阻、气血运行不畅,联合内服自拟中药化痰祛瘀方,方中党参、茯苓、白术、陈皮、法半夏益气健脾、渗湿化痰、白芥子、胆南星理气化痰、蜈蚣、水蛭逐瘀通络、活血定痛,丹参、当归活血通络,续断、牛膝、骨碎补补肝肾、精益髓,甘草调和诸药,全方共奏健脾利湿,化痰通络、活血定痛之功。通过内外合治,降低了骨内压,股骨头内微循环障碍及毛

细血管通透性得到改善,从而达到缓解疼痛,促进坏死修复及延缓病情进展的目的。

本研究结果表明小针刀及髓芯减压联合内服中药治疗股骨头缺血性坏死骨髓水肿导致急性髋部疼痛的患者的VAS评分及Harris评分均得到显著改善,髋关节疼痛得到减轻或缓解,关节活动受限得到改善,无术口感染及不良反应发生,临床治疗总有效率达到83.3%,与髓芯减压联合内服中药治疗的患者对比无统计学差异,效果相当。治疗组的术中出血量,住院时间和治疗费用均显著低于对照组,差异具有统计学意义($P<0.05$)。说明两种治疗方法均具有创伤小、痛苦小、安全、出血少、可操作性强、近期疗效确切、疼痛缓解快的特点,但针刀治疗具有创伤更小,操作更简便,花费更少、依从性好等特点,真正体现了中医"简、便、效、廉"优势,值得在临床,特别是基层推广应用。

综上所述,股骨头缺血性坏死为难治性疾病,如何发挥中医药特色,促进军民融合,强调以人为本,注重局部与整体、药物与微创、内外合治的优势,提高治疗股骨头缺血性坏死的近期、远期疗效,改善军地患者生活质量,恢复或者维持关节功能,降低致残率,是下一步共同努力和研究的方向。

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