

超声引导下肩胛上神经阻滞结合针刺治疗肩袖钙化性肌腱炎

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【摘要】 目的:探讨超声引导下肩胛上神经阻滞结合针刺技术治疗肩袖钙化性肌腱炎的方法与疗效。方法:回顾分析 2015 年 1 月至 2017 年 12 月收治的 23 例冈上肌腱、5 例冈下肌腱、2 例肩胛下肌腱钙化性肌腱炎患者行超声引导下肩胛上神经阻滞结合针刺技术治疗的效果。其中男 7 例,女 23 例;年龄 36~71 岁,平均 51.6 岁;右侧 17 例,左侧 13 例。采用 VAS 疼痛评分、Constant-Murley 评分、UCLA 评分及 X 线检查对患者进行手术前后的评估。结果:所有患者获得随访,时间 6~30 个月,平均 14.3 个月,症状均得到明显改善。术前 VAS 评分 3.82±1.13,Constant-Murley 评分 36.91±7.95,UCLA 评分 11.35±2.17;末次随访分别为 1.32±1.06、90.61±2.89、33.22±1.51,末次随访评分均改善 ($P < 0.05$)。结论:保守治疗无效的肩袖钙化性肌腱炎,行超声引导下肩胛上神经阻滞结合针刺治疗效果良好,是一种创伤小、经济、安全、有效的方法,值得推广。

【关键词】 肩痛; 肩关节; 针刺疗法; 超声检查

中图分类号:R246,R686

DOI:10.3969/j.issn.1003-0034.2019.06.004

开放科学(资源服务)标识码(OSID):



Ultrasound-guided suprascapular nerve block combined with acupuncture for the treatment of calcified tendinitis of rotator cuff LI Ying-zhi, YU Hai-chi, LI Rong-hang, MENG Jie, JIANG Zhen-de, DONG Xiao-ming, CHEN Hai-yu, GAO Ling, WANG Xue, ZHAO Yun-ting, ZHANG Wei, and LIU Xiao-ning. Department of Sports Medicine, Orthopaedic Center, the Second Hospital of Jilin University, Changchun 130041, Jilin, China

ABSTRACT Objective:To explore the method and effect of ultrasound-guided suprascapular nerve block combined with acupuncture in the treatment of calcified tendinitis of rotator cuff. **Methods:**From January 2015 to December 2017, total 30 patients with calcified tendinitis, including 23 cases of supraspinatus tendon, 5 cases of infraspinatus tendon and 2 cases of subscapular tendon, were treated with ultrasound-guided suprascapular nerve block combined with acupuncture. There were 7 males and 23 females, ranging in age from 36 to 71 years old, with an average of 51.6 years old. There were 17 cases on the right and 13 cases on the left. VAS pain score, Constant-murley score, UCLA score and X-ray examination were used to evaluate the clinical results before and after surgery. **Results:**The mean follow-up was 14.3 months (6 to 30 months). The preoperative VAS score was 3.82±1.13, Constant-Murley score was 36.91±7.95 and UCLA score was 11.35±2.17. The final follow-up scores were 1.32±1.06, 90.61±2.89 and 33.22±1.51, respectively. The final follow-up scores were improved significantly ($P < 0.05$). **Conclusion:**Conservative treatment of calcified rotator cuff tendinitis is ineffective. Suprascapular nerve block guided by ultrasound combined with acupuncture has a good therapeutic effect. It is a minimally invasive, economic, safe and effective method, which is worth promoting.

KEYWORDS Shoulder pain; Shoulder joint; Acupuncture therapy; Ultrasonography

急性肩袖钙化性肌腱炎是引起肩关节疼痛、活动受限的常见非创伤性疾病,是由多种原因产生的钙质在肩袖肌腱内沉积所致,好发于 30~50 岁的女性^[1]。急性肩袖钙化性肌腱炎以冈上肌腱发病率最高,其发病原因尚不明确,多数学者认为与劳损、外伤、退行性变等相关^[2]。治疗上,体外冲击波对冈上肌腱钙化性肌腱炎的治疗具有明显的疗效^[3]。而关节镜

治疗创伤小、恢复快,能同时对盂肱关节、肩峰下间隙、肩袖的病变一并处理,是治疗肩袖钙化性肌腱炎的较好选择。相比较而言,体外冲击波及超声引导下针刺是较低损伤的方式,而关节镜下治疗相对来说更有创伤性^[4]。目前,国内肩关节镜技术还未得到广泛普及,超声引导下肩胛上神经阻滞结合针刺技术治疗肩袖钙化肌腱炎有一定的应用前景。自 2015 年 1 月至 2017 年 12 月,治疗 30 例肌腱钙化性肌腱炎患者(其中 23 例冈上肌腱、5 例冈下肌腱、2 例肩胛下肌腱),效果良好,报告如下。

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1 资料与方法

1.1 临床资料

本组 30 例,男 7 例,女 23 例;年龄 36~71 岁,平均 51.6 岁;右侧 17 例,左侧 13 例。其中冈上肌腱钙化性炎 23 例,冈下肌腱钙化性炎 5 例,肩胛下肌腱钙化性炎 2 例。术前经历 1~3 个月的保守治疗无效,24 例夜间痛明显,不敢翻身,影响睡眠,肩关节活动受限。X 线检查包括肩关节前后位、冈上肌出口位(图 1),1 例见疼痛诱发三角肌抑制引起的半脱位(图 2a),急性期发生自发性的钙重吸收或者局部针刺以后表现为半透明或云雾状,边界不清(图 1b, 1c)。术前 MRI(2b)及三维 CT 检查(2c)明确病灶部位。

1.2 治疗方法

采用超声引导下肩胛上神经阻滞与病灶针刺法

治疗。超声检查法:(1)肩胛下肌肌腱。患肩体侧外旋,分别在长轴和短轴方向观察肩胛下肌肌腱及其在小结节上的附着点。被动内旋和外旋肩关节,可动态观察肩胛下肌肌腱活动。(2)冈上肌肌腱。患肩后伸、内收、内旋,在长轴和短轴方向观察冈上肌肌腱及肩峰下滑囊。(3)冈下肌和小圆肌肌腱。患侧手置于对侧肩关节上方,探头置于孟肱关节后侧,即可观察冈下肌和小圆肌肌腱。滑囊炎的表现:滑囊壁不同程度增厚,内部可见无回声或低回声液像暗区。肌腱病变的表现:肌腱局部增厚,肌腱内可见钙化灶,内部可见回声减低或者信号不均匀。超声在冈上切迹探及到肩胛上神经后,避开肩胛上血管,于神经周边注射 1~2 ml 利多卡因复方倍他米松混合液(配比:利多卡因 5 ml,复方倍他米松 1 ml)阻滞。于肩峰下



图 1 患者,女,54 岁,冈上肌腱钙化性肌腱炎 1a. 术前 X 线片示冈上肌腱钙化病灶,边界清晰(白箭头所示) 1b. 针刺 1 个月复查 X 线片示钙化灶呈云雾状模糊影 1c. 针刺 2 个月复查 X 线片示钙化灶消失

Fig.1 Female, 54 years old, supraspinatus calcified tendonitis 1a. Preoperative X-ray showed calcified lesions of supraspinatus tendon with clear margins (shown by white arrow) 1b. X-ray after 1 month of acupuncture showed that calcification was cloudy and hazy 1c. X-ray showed that calcification disappeared after 2 months of acupuncture

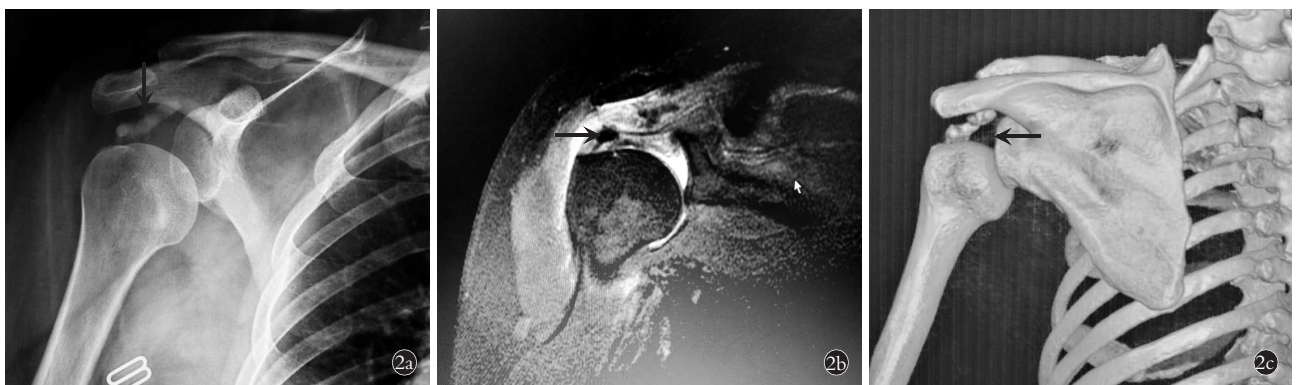


图 2 患者,女,36 岁,冈上肌腱钙化性肌腱炎 2a. 术前 X 线片示冈上肌腱钙化病灶,边界清晰,肩关节半脱位(黑箭头所示) 2b. 术前 MRI 示冈上肌腱钙化病灶,边界清晰,周围软组织水肿(黑箭头所示) 2c. 术前三维 CT 示冈上肌腱钙化病灶,边界清晰,病灶深入肩峰下间隙内侧(黑箭头所示)

Fig.2 Female, 36 years old, supraspinatus calcified tendonitis 2a. Preoperative X-ray showed calcification of supraspinatus tendon with clear boundary and shoulder subluxation (shown by black arrow) 2b. Preoperative MRI showed calcification of supraspinatus tendon with clear margins and surrounding soft tissue edema (shown by black arrow) 2c. Preoperative three-dimensional CT showed calcified lesions of supraspinatus tendon with clear margins. The lesions penetrated into the medial subacromial space (shown by black arrow)

钙化性肌腱炎的超声影像分型: I 型, 强回声后方伴明显声影, 对应了钙化形成期; II 型, 高回声后方伴模糊声影; III 型, 钙化灶后方无声影。后 2 种类型对应了钙化沉积物转变为半流体, 提示钙化沉积物再吸收状态, 当针刺入病灶内时, 偶尔可以见到钙质喷薄而出形成“暴风雪”样图像, 类似肩关节镜直视下使用腰椎穿刺针定位钙质沉积区或用探钩沿着肩袖方向挤压后观察到“暴风雪”样飞舞的沉着物。

术中注意事项: (1) 尽可能通过针刺, 促进钙化病灶的充分释放, 同时需注意保护肩袖不增加损伤。有报道富含血小板血浆 (platelet rich plasma, PRP) 可利于针刺后肩袖组织的修复^[12], 金葡素可促使腱骨界面愈合^[13], 笔者无此方面的经验。(2) 病灶靠近肩峰下间隙内侧的部位有时针刺有一定的困难, 不必强求, 如同关节镜直视下肌腱内钙质沉积物也往往难以完全清除^[14]。病灶局部针刺干预可能导致病变部位的微环境发生改变, 进而启动病灶逐渐吸收过程, 治疗后定期复查 X 线片可以看到病灶逐步吸收 (图 1b, 1c)。(3) 针刺操作待麻醉药物充分吸收后进行, 一方面减轻操作的疼痛, 另一方面可以避免针刺后药物入血诱发头晕、心慌等症状。

总之, 结合目前我国国民经济状况和关节镜技术的普及程度, 本研究有一定的临床推广应用价值。当然, 超声引导下无论是神经阻滞还是病灶针刺对操作医生的技术水平、熟练程度有一定的依赖性。不足之处: 病例相对较少, 随访时间较短, 回顾性研究, 有待进一步多中心大样本随机对照研究验证。

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(收稿日期: 2019-02-15 本文编辑: 连智华)