

双 Endobutton 钢板重建喙锁韧带联合 I 期肩锁韧带修复治疗 III 度以上肩锁关节脱位

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【摘要】 目的:探讨双 Endobutton 钢板联合 I 期肩锁韧带修复治疗 III 度以上肩锁关节脱位的临床疗效。方法:自 2010 年 1 月至 2013 年 9 月,手术治疗 56 例 Rockwood III 度以上肩锁关节脱位的患者,其中男 20 例,女 36 例;年龄 32~52 岁,平均 38.5 岁;左侧 25 例,右侧 31 例;受伤至手术时间 3~14 d,平均 7 d。术前均诊断为肩锁关节脱位(Rockwood III 度以上),手术采用双 Endobutton 钢板进行喙锁韧带重建,同时行带线金属骨锚钉修复肩锁韧带。观察患者术后并发症情况,并采用 Karlsson 评定标准及 Constant-Murley 评分进行肩关节功能评定。结果:所有患者获得随访,时间 8~24 个月,平均 11 个月。术后 6 个月随访时根据 Karlsson 评定标准 A 级 42 例, B 级 13 例, C 级 1 例。Constant-Murley 肩关节功能总分由术前的(42.80±5.43)分提高至术后 6 个月的(91.75±4.27)分。术后 6 个月各项评分均优于术前($P < 0.05$),其中优 48 例,良 7 例,差 1 例。所有患者随访期间均未出现肩关节粘连,钢板螺钉松动、断裂。结论:双 Endobutton 钢板重建喙锁韧带联合 I 期肩锁韧带修复治疗 III 度以上肩锁关节脱位早期临床疗效满意,有利于肩关节功能早期恢复。

【关键词】 肩锁关节; 脱位; 韧带; 修复外科手术

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Double Endobutto reconstituting coracoclavicular ligament combined with repairing acromioclavicular ligament at stage I for the treatment of acromioclavicular dislocation with Rockwood type III - V HU Wen-yue, YU Chong, HUANG Zhong-ming, and HAN Lei. Xiaoshan Hospital of TCM, Hangzhou 311201, Zhejiang, China

ABSTRACT Objective: To explore clinical efficacy of double Endobutto reconstituting coracoclavicular ligament combined with repairing acromioclavicular ligament in stage I in treating acromioclavicular dislocation with Rockwood type III - V. **Methods:** From January 2010 to September 2013, 56 patients with Rockwood type III - V acromioclavicular dislocation were treated by operation, including 20 males and 36 females, aged from 32 to 52 years old with an average of 38.5 years old. Twenty-five patients were on the left side and 31 cases on the right side. The time from injury to operation was from 3 to 14 days, averaged 7 days. All patients were diagnosed as acromioclavicular dislocation with Rockwood type III - V, and double Endobutto were used to reconstituting coracoclavicular ligament, line metal anchors were applied for repairing acromioclavicular ligament. Postoperative complications were observed, Karlsson and Constant-Murley evaluation standard were used to evaluate clinical effects. **Results:** All patients were followed up from 8 to 24 months with average of 11 months. According to Karlsson evaluation standard at 6 months after operation, 42 cases were grade A, 13 were grade B and 1 was grade C. Constant-Murley score were improved from (42.80±5.43) before operation to (91.75±4.27) at 6 months after operation. All items at 6 months after operation were better than that of preoperative items. Forty-eight patients got excellent results, 7 were moderate and only 1 with bad result. No shoulder joint adhesion, screw loosening or breakage were occurred during following up. **Conclusion:** Double Endobutto reconstituting coracoclavicular ligament combined with repairing acromioclavicular ligament in stage I for the treatment of acromioclavicular dislocation with Rockwood type III - V could obtain early satisfied clinical effects, and benefit for early recovery of shoulder joint function.

KEYWORDS Acromioclavicular joint; Dislocations; Ligaments; Reconstructive surgical procedures

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肩锁关节脱位是临床常见的肩关节创伤性疾病,尤其以中青年发病率较高,占全身的骨折脱位的 4.40%~5.89%,占肩关节脱位的 12%^[1]。目前临床上对于 Rockwood I 度及 II 度损伤行保守治疗的意见较为统一,而对于 III 度损伤的临床治疗应行保守还

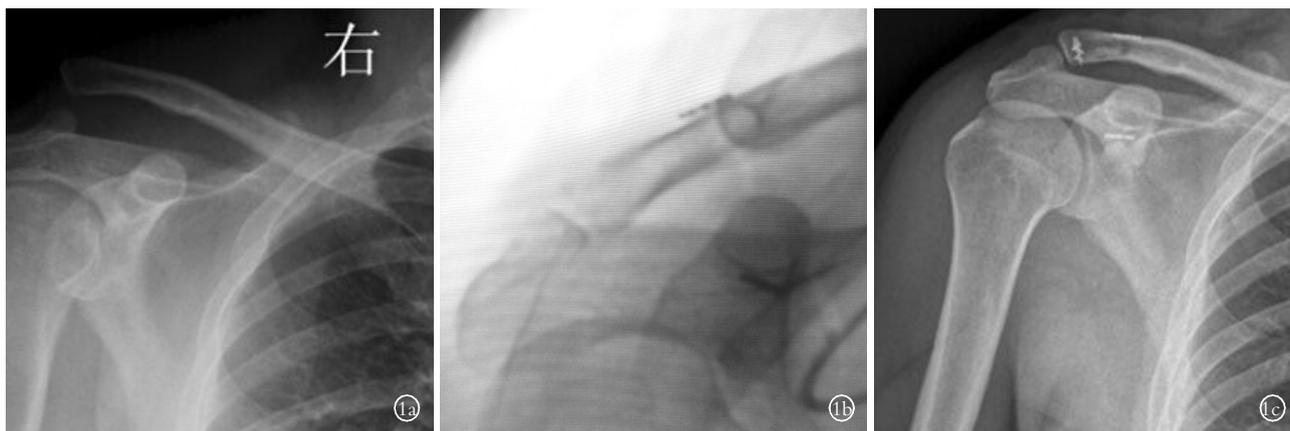


图 1 患者,女,41 岁,车祸伤致右侧肩锁关节脱位(Rockwood III 度) 1a. 术前应力位 X 线片 1b. 术中 C 形臂 X 线正位透视示喙锁间隙恢复 1c. 术后 3 d 正位 X 线片示肩锁关节复位良好

Fig.1 A 41-year-old female patient with right acromioclavicular joint dislocations caused by traffic accident(Rockwood type III) 1a. Preoperative stress radiograph 1b. Intraoperative C-shaped arm X-ray showed recovery of coracoclavicular distance 1c. Postoperative AP X-ray at 3 days showed good reduction of acromioclavicular joint

月。术后 6 个月随访时根据 Karlsson 评定标准优良 39 例,满意 22 例。Constant-Murley 肩关节功能总评分由术前的 (42.80±5.43) 分提高至术后 6 个月的 (91.75±4.27) 分。术后 6 个月各项评分均优于术前 (SPSS 19.0 统计软件, $P < 0.05$, 见表 1), 其中优 48 例, 良 7 例, 差 1 例。所有患者随访期间均未出现肩关节粘连, 术后 Zanca 位 X 线片复查均未发生钢板螺钉松动、断裂。典型病例见图 1。

4 讨论

双 Endobutton 重建喙锁韧带治疗肩锁关节脱位已广泛应用于临床, 早期随访均可获得满意疗效^[8]。但随着患者逐渐恢复正常的肩关节活动, 肩关节上举时锁骨的轴向选择造成环形攀在骨道口切割, 即所谓“雨刮器效应”, 造成环形攀的蠕变, 强度逐渐下降, 造成一定程度的复位丢失^[9]。通常术中处理肩锁关节残留的软骨盘, 后期随着肩锁关节周围微动幅度增加, 引起关节盘源性疼痛^[10]。生物力学拉力试验表明在肩锁关节脱位的损伤机制中, 肩锁韧带首先承受外界作用力, 当肩锁韧带完全断裂后喙锁韧带才开始承受作用力, 而两组韧带差距仅 50 N, 表明喙锁韧带并不如以往想象中作用强大, 肩锁韧带的稳定作用更应该得到充分认识^[11]。笔者前期采用双 Endobutton 重建喙锁韧带来治疗 III 度以上肩锁关节脱位, 未修复肩锁韧带, 通过中远期随访发现其喙锁间隙距离有不同程度增加, 提示半脱位甚至脱位, 相应的肩关节存有一定功能障碍。

目前临床上对于肩锁韧带修复的必要性并无统一标准。国内学者报道临床病例显示, 在肩锁关节囊和肩锁韧带完整情况下切断喙锁韧带, 锁骨并没有发生明显的活动, 同时切断肩锁韧带才引起肩锁关

节完全脱位^[12]。本文通过双 Endobutton 钢板重建喙锁韧带增加肩锁关节上下方的稳定性, 同时利用锚钉 I 期修复肩锁韧带以控制肩锁关节前后移位, 通过 Karlsson 评定均为优良, 肩关节功能 Constant-Murley 评分显示术后 6 个月各项评分均优于术前, 表明双 Endobutton 钢板重建喙锁韧带联合 I 期肩锁韧带修复治疗 III 度以上肩锁关节脱位能够获得良好的早期疗效。

由于 Endobutton 钢板并非为治疗肩锁关节脱位而设计, 在手术操作过程中受 Endobutton 钢板规格的限制, 在恢复重建的喙锁韧带长度上往往存在一定困难, 有失败的风险。如合并喙突骨折, 尤其是骨折线位于喙突基底部的患者, 该术式为禁忌证。同时喙突基底部直径需 >10 mm, 否则在喙突上钻直径 4.5 mm 的孔时容易出现手术失败, 因此喙突过于细小患者不适于该术式^[13]。Endobutton 技术联合 I 期肩锁韧带修复治疗肩锁关节脱位目前尚缺乏明确的远期疗效观察。本组病例及随访时间有限, 且缺乏病例对照研究, 远期疗效和并发症需进一步随访研究。

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