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关节镜下同期行冻结肩松解术对肩袖损伤患者的治疗效果评估*

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摘要 目的:评估关节镜下同期行冻结肩松解术对肩袖损伤患者的治疗效果。**方法:**选择 2015 年 3 月到 2018 年 3 月在我院诊治的肩袖损伤患者 70 例进行研究,按随机数表法将其分为观察组(n=36)和对照组(n=34)。对照组采用传统小切口肩袖修复术治疗,观察组采用关节镜下同期行冻结肩松解术进行治疗。比较两组治疗后疗效、手术时间、术中出血量、住院时间、疼痛减轻时间、治疗前后 VAS、美国肩肘外科协会评分(ASES)、Contant-Muley 评分的变化情况。**结果:**治疗后,观察组总有效率为 94.44%,显著高于对照组(73.53%, $P<0.05$);观察组手术时间、术中出血量、住院时间及疼痛减轻时间均显著低于对照组($P<0.05$);两组 VAS、ASES、Contant-Muley 评分较治疗前均显著改善($P<0.05$),且观察组 VAS 评分明显低于对照组,ASES 及 Contant-Muley 评分显著高于对照组($P<0.05$)。**结论:**关节镜下同期行冻结肩松解术治疗肩袖损伤的临床疗效显著优于传统小切口肩袖修复术治疗,其可显著促进关节功能恢复,并减轻患者痛苦。

关键词:关节镜;冻结肩松解术;肩袖损伤;视觉模拟评分法;关节功能

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Therapeutic Effect of Arthroscopic Treatment with Frozen Shoulder Release on the Rotator Cuff Injury*

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ABSTRACT Objective: To study the therapeutic effect of Arthroscopic treatment with frozen shoulder release on the rotator cuff injury. **Methods:** 70 patients with rotator cuff injury diagnosed and treated in our hospital from March 2015 to March 2018 were selected and divided into the observation group (n=36) and the control group (n=34) according to the random number table method. The control group was treated with traditional small incision rotator cuff repair, and the observation group was treated with arthroscopic frozen shoulder release at the same time. The changes of VAS, ases and contact muley scores before and after treatment were compared between the two groups. **Results:** After treatment, the total effective rate of observation group was 94.44%, which was significantly higher than that of the control group (73.53%, $P<0.05$); the operation time, intraoperative blood loss, hospitalization time and pain relief time of the observation group were significantly lower than that of the control group ($P<0.05$); and the VAS scores of observation group were significantly lower than that of the control group, ases and contact muley scores Significantly higher than the control group ($P<0.05$). **Conclusion:** Arthroscopic treatment with frozen shoulder release is significantly better than traditional small incision repair of rotator cuff, which can significantly promote the recovery of joint function and reduce the pain of patients.

Key words: Arthroscopy; Frozen shoulder release; Rotator cuff injury; Visual analogue scoring; Joint function

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前言

肩袖损伤属于一种肩关节损伤继发性慢性疾病,肩袖位于肩峰和三角肌下方,对肩关节稳定起重要作用,与关节囊紧密相连,能使肱骨头紧密接触肩胛盂。肩袖损伤能减弱骨头与关节盂的正常支点,严重影响上肢外展功能^[1,2]。本病多发生于 40 岁以上重体力劳动者,病程迁延可出现肌肉萎缩,导致肩部慢

性疼痛。目前,临床通常借助手术对患者进行治疗,但是肩袖组织结构十分独特,手术困难较大,导致术后恢复不理想^[3,4]。传统小切口肩袖修复术是治疗肩袖损伤最常用的方法,术后肩关节粘连发生程度低,但是创伤较大^[5,6]。

有研究显示关节镜技术具有出血量少、术后功能恢复快等优点,已广泛运用于临床^[7]。关节镜下同期行冻结肩松解术能处理手法难以松解到的部位以及不能处理的病变,减少出血量及

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术后再粘连的发生,避免造成关节内损伤^[89]。但是临床上关于关节镜下同期行冻结肩松解术治疗肩袖损伤的相关报道较少。因此,本研究主要探讨了关节镜下同期行冻结肩松解术对肩袖损伤的疗效,现报道如下。

1 资料与方法

1.1 一般资料

选择 2015 年 3 月到 2018 年 3 月在我院诊治的肩袖损伤患者 70 例进行研究。采用简单随机分组法分为 2 组,观察组 36 例,对照组 34 例,,两组一般资料无显著性差异($P>0.05$),具有可比性,见表 1。纳入标准:(1)符合《肩袖损伤的诊断和治疗进展》^[10]诊断标准确诊;(2)伴有冻结肩;(3)肩功能活动障碍者。排除标准:(1)同侧上肢骨折者;(2)关节内骨折史;(3)神志不清,无法配合者。

表 1 两组一般资料的比较

Table 1 Comparison of the general information between the two groups

Groups	n	Gender (M/F)	Age (years)	Course of disease (month)	The damage position	
					On the left side of the	On the right side
Observation group	36	19/17	65.34± 3.52	4.52± 1.24	15	21
Control group	34	15/19	65.41± 3.49	4.54± 1.25	14	20
<i>P</i> value		0.469	0.934	0.947	0.967	

1.2 方法

对照组患者麻醉后进行手法松解治疗,然后再行肩关节镜肩袖修复术。将关节镜置入并进行探查,若探查发现肩峰下方有炎性滑囊、游离体时则将其清除,清除后退出关节镜在进行手法松解。观察组关节镜引导下建立入路,切除增生滑膜,用射频刀头松解肩袖间隙内的上盂肱韧带、喙肱韧带,直至喙突。关节镜松解术完成后,检查松解情况。

1.3 观察指标

观察记录两组患者手术情况;疼痛评分均采用视觉模拟评分法^[11]进行:0 分表示无痛;分值越高,疼痛感越强;ASES 评分:分为疼痛、生活,满分各 50 分,分值越高,肩关节功能越好;Contant-Muley 评分:总分 100,分数越高,恢复功能越好。

疗效评价标准参考文献进行评定^[12]:显效:临床症状消失,

肩功能恢复正常,日常生活不受影响;有效:临床症状明显改善,日常生活稍有影响;无效临床症状无明显改善或加重。显效+有效为有效率。

1.4 统计学分析

以 SPSS18.0 软件包处理,计量资料均为正态分布,用均值±标准差($\bar{x} \pm s$)表示,组间比较使用独立样本 *t* 检验,计数资料以率表示,组间比较采用 χ^2 检验,以 $P<0.05$ 表示差异具有统计学意义。

2 结果

2.1 两组疗效的比较

治疗后,观察组总有效率为 94.44%,显著高于对照组(73.53%, $P<0.05$),见表 2。

表 2 两组疗效比较[例(%)]

Table 2 Comparison of the efficacy between the two groups[n(%)]

Groups	n	Excellent	Effective	Invalid	Total effective rate
Observation group	36	19(52.78)	15(41.67)	2(5.56)	34(94.44)
Control group	34	14(41.18)	11(32.35)	9(26.47)	25(73.53)
u/χ^2 value			$u=1.634$		$\chi^2=5.775$
<i>P</i> value			$P=0.102$		$P=0.016$

2.2 两组手术情况比较

观察组手术时间、术中出血量、住院时间及疼痛减轻时间

均显著低于对照组,差异显著($P<0.05$),见表 3。

表 3 两组手术情况比较($\bar{x} \pm s$)

Table 3 Comparison of the surgical conditions between the two groups($\bar{x} \pm s$)

Groups	n	The operation time (min)	Intraoperative blood loss (mL)	The length of time (d)	Pain relief time (h)
Observation group	36	73.94± 5.31	56.83± 6.75	3.09± 0.41	23.14± 4.35
Control group	34	86.17± 6.15	85.39± 7.69	5.07± 0.25	37.04± 4.21
<i>t</i> value		8.920	16.538	24.221	13.572
<i>P</i> value		0.000	0.000	0.000	0.000

2.3 两组治疗前后 VAS、ASES 评分比较

观察组 VAS 评分明显低于对照组,ASES 评分显著高于对照组

两组 VAS、ASES 评分较治疗前均显著改善 ($P<0.05$),且 ($P<0.05$),见表 4。表 4 两组治疗前后 VAS、ASES 评分比较($\bar{x} \pm s$,分)Table 4 Comparison of the VAS and ASES scores between the two groups before and after treatment($\bar{x} \pm s$, points)

Groups	n	VAS		ASES	
		Before the treatment	After treatment	Before the treatment	After treatment
Observation group	36	4.97 $\pm$ 0.92	1.84 $\pm$ 0.47	67.52 $\pm$ 4.97	94.38 $\pm$ 4.28
Control group	34	4.95 $\pm$ 0.89	2.25 $\pm$ 0.51	67.49 $\pm$ 4.92	87.89 $\pm$ 6.21
t value		0.092	3.500	0.025	5.116
P value		0.927	0.001	0.979	0.000

2.4 两组治疗前后 Contant-Muley 评分比较

且观察组 Contant-Muley 评分显著高于对照组($P<0.05$), 见两组 Contant-Muley 评分较治疗前均显著改善 ($P<0.05$), 表5。表 5 两组治疗前后 Contant-Muley 评分比较($\bar{x} \pm s$,分)Table 5 Comparison of the Contant-Muley scores between the two groups before and after treatment($\bar{x} \pm s$, points)

Groups	n	Contant-Muley	
		Before the treatment	After treatment
Observation group	36	67.35 $\pm$ 3.61	92.36 $\pm$ 3.18
Control group	34	67.41 $\pm$ 3.70	83.45 $\pm$ 4.71
t value		0.069	9.323
P value		0.945	0.000

3 讨论

肩袖损伤是骨科发生率较高的疾病,是一种十分普遍的肩关节退行性病变。相关研究表明随着年龄的增长及肩部的劳损,肩袖随之出现退行性改变^[13,14]。研究显示肩袖损伤多发生于老年人,其中约 45%左右患者伴有冻结肩,当冻结肩发生肩袖损伤时,患者肩关节囊与软组织粘连,导致肩袖损伤症状更为明显^[15,16]。临床通常使用传统小切口肩袖修复术治疗该病,但是该方法副患者创伤较大,术后疼痛感长,且对患者肩关节功能活动有影响^[17,18]。

随着关节镜技术的发展,有学者提出在关节镜下松解治疗肩袖损伤,并取得了良好的效果^[19,20]。关节镜下同期行冻结肩松解术能处理手法难以松解到的部位以及不能处理的病变,且松解范围是肩袖间隙、孟肱下韧带、关节囊,进一步观察孟肱关节及肩峰下间隙,处理肩峰下滑囊炎,肩峰撞击等病变^[21,22]。大量研究显示关节镜下同期行冻结肩松解术已被广泛运用于肩袖损伤的治疗中,且取得了不错的效果^[23]。本研究结果显示使用关节镜下同期行冻结肩松解术治疗的患者临床总有效率为 94.44%,明显高于使用传统小切口肩袖修复术治疗的患者,且手术时间、术中出血量、住院时间及疼痛减轻时间均低于使用传统小切口肩袖修复术的患者。Gallacher S^[24]等研究也显示关节镜下同期行冻结肩松解术治疗肩袖损伤效果显著,提示关节镜下同期行冻结肩松解术可提高患者的临床疗效,改善患者的手术情况。分析其原因可能为关节镜下同期行冻结肩松解术对

手术操作过程有一定的简化,且可防止手法复位,容易造成牵拉伤及关节镜的再次损伤,有利于患者术后早期愈合,从而提高患者的临床疗效。

疼痛是肩袖损伤患者主要症状,大部分患者的疼痛和功能障碍是长期存在的,若得不到及时治疗,患者将长期处于长期疼痛感,严重者甚至会影响睡眠^[25,26]。VAS 评分在临床常用于疼痛的评估,能代表患者疼痛的程度^[27,28]。本研究结果显示患者治疗后 VAS、ASES 评分明显改善,且使用关节镜下同期行冻结肩松解术的患者改善情况优于使用传统小切口肩袖修复术的患者。Sawyer EE^[29]等研究也显示关节镜下同期行冻结肩松解术治疗肩袖损伤,患者 VAS 明显降低,提示关节镜下同期行冻结肩松解术治疗肩袖损伤疗效确切,可重复性强,可缓解肩袖损伤患者的疼痛感。对于肩袖损伤患者治疗目前就是缓解疼痛、恢复患者关节活动度,有研究显示关节镜下同期行冻结肩松解术是一项可重复性高的技术,能较高观察关节囊,在关节镜直视下松解关节囊,恢复患者关节功能^[30]。本研究结果显示使用关节镜下同期行冻结肩松解术的患者 Contant-Muley 评分明显高于使用传统小切口肩袖修复术的患者。分析原因是因为关节镜下同期行冻结肩松解术是将游离体清除、恢复功能基础上行肩袖修复,手术中将关节镜退出,手法松解关节,达到功能位,有利于患者的关节功能的恢复。

综上所述,关节镜下同期行冻结肩松解术治疗肩袖损伤的临床疗效显著优于传统小切口肩袖修复术治疗,其可显著促进关节功能恢复,并减轻患者痛苦。

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