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前哨淋巴结活检术联合保乳治疗对早期乳腺癌患者临床疗效、术后并发症及肩关节功能的影响*

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摘要 目的:探讨前哨淋巴结活检术联合保乳治疗对早期乳腺癌患者临床疗效、术后并发症及肩关节功能的影响。**方法:**选取 2014 年 10 月至 2017 年 2 月就诊于我院的乳腺癌患者,按照患者手术方式分为联合组与对照组,其中联合组行前哨淋巴结活检术联合保乳治疗,对照组行传统腋窝淋巴结清扫术治疗,每组各选取 50 例,随访时间为 6 个月。比较两组手术情况、并发症、乳腺美容效果及肩关节功能情况。**结果:**联合组手术时间、总出血量、引流管拔除时间、总引流量均明显低于对照组($P<0.05$)。手术治疗后,联合组并发症比例为 6%,明显低于对照组 38%。术后,两组患者随访 6 个月,联合组乳腺美容效果明显高于对照组($P<0.05$)。术前,两组肩关节功能各指标水平比较差异不显著($P>0.05$);术后,两组肩关节屈曲活动度、外旋活动度、后伸活动度、外展活动度相较于术前均明显降低($P<0.05$),联合组内旋活动度相较于术前降低不显著($P>0.05$),而对照组内旋活动度相较于术前降低显著($P<0.05$)。术后,联合组肩关节屈曲活动度、外旋活动度、内旋活动度、后伸活动度、外展活动度均显著高于对照组($P<0.05$)。**结论:**前哨淋巴结活检术联合保乳治疗早期乳腺癌创伤小,美容效果明显,可显著降低术后并发症发生率并减轻对患者肩关节功能的损害,远期疗效仍有待于进一步随访观察。

关键词:前哨淋巴结活检;保乳;早期乳腺癌;疗效;并发症;肩关节功能

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Effect of Sentinel Lymph Node Biopsy Combined with Breast-conserving Therapy on the Clinical Efficacy, Postoperative Complications and Shoulder Function of Patients with Early Breast Cancer*

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ABSTRACT Objective: To investigate the effect of sentinel lymph node biopsy combined with breast-conserving therapy on the clinical efficacy, postoperative complications and shoulder function of patients with early breast cancer. **Methods:** Patients with breast cancer treated in our hospital from October 2014 to February 2017 were divided into the combined group and control group according to the patients' operation, 50 cases were selected in each group. The combined group received sentinel lymph node biopsy combined with breast-conserving therapy. The control group was treated with traditional axillary lymph node dissection. The follow-up period was 6 months. The operation condition, complications, cosmetic results and shoulder function were compared between the two groups. **Results:** The total operative time, total bleeding volume, drainage time and total drainage volume of the combined group were significantly lower than those of the control group ($P<0.05$). After surgery, the complication rate was 6% in the combined group, significantly lower than that in the control group (38%). Two groups were followed up for 6 months, the breast cosmetic effect of combined group was significantly higher than the control group ($P<0.05$). Before surgery, there were no significant differences in the indexes of shoulder joint function between the two groups ($P>0.05$). After surgery, the flexion activity, external rotation activity, extension activity and abduction activity of the two groups were significantly higher than those before operation ($P<0.05$). The internal rotation activity of the combined group was not significantly changed ($P>0.05$), while the internal rotation activity of the control group was significantly lower than that before the operation ($P<0.05$). After operation, the flexion activity, external rotation activity, internal rotation activity, posterior extension activity and abduction activity of the combined group were significantly higher than those of the control group ($P<0.05$). **Conclusion:** Sentinel lymph node biopsy combined with breast-conserving treatment of early breast cancer is less traumatic, obviously effective in cosmetic, and can significantly reduce the incidence of postoperative complications and the shoulder joint function damage. The long-term effect remains to be further observed.

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前言

乳腺癌是女性高发恶性肿瘤,临床症状主要表现为乳头回缩、乳头溢液以及乳房皮肤橘皮样改变等,传统治疗方法主要为乳房切除配合腋窝淋巴结清扫术治疗,而该方法手术时间长、创伤大、并发症多,且术后易造成患者肩部功能障碍,对术后生活及身心健康造成极大影响^[1,2]。近年来,保留乳房的乳腺癌切除术在临床上广泛应用,该综合疗法可避免乳房缺失且具有类似于传统手术的减少复发的疗效,可显著提高患者术后的生活质量,具有积极的临床价值^[3-6]。国内外许多研究已经证实保乳保腋窝手术的安全性^[7,8]。前哨淋巴结活检术联合保乳治疗乳腺癌患者,具有手术时间短、术后创伤小及恢复快,并发症较少,美容效果好等优点^[9-11]。本研究主要探讨了前哨淋巴结活检术与保乳联合应用治疗早期乳腺癌患者的手术疗效及对患者肩功能的影响,结果报道如下。

1 资料与方法

1.1 一般资料

选取 2014 年 10 月至 2017 年 2 月期间就诊于我院的早期乳腺癌患者作回顾性分析,按照患者手术方式分为联合组与对照组,其中行前哨淋巴结活检术联合保乳治疗患者设为联合组,选取 50 例,行腋窝淋巴结清扫术患者设为对照组,选取 50 例。随访时间为 6 个月。联合组年龄 29 岁~68 岁,平均年龄(43.8±4.7)岁;其中病位外上象限 35 例,非外上象限 15 例;浸润性导管癌 27 例,非浸润性导管癌 23 例;临床分期 I 期 21 例,II 期 29 例。对照组年龄 31 岁~69 岁,平均年龄(45.1±4.2)岁;其中病位外上象限 32 例,非外上象限 18 例;浸润性导管癌 29 例,非浸润性导管癌 21 例;临床分期 I 期 19 例,II 期 31 例。联合组与对照组基线资料比较无统计学差异($P>0.05$)。

病例纳入标准:按照乳腺癌诊断标准^[12]确诊为早期乳腺癌且临床分期为 I、II 期;乳腺肿瘤与乳头距离在 3 cm 以上且肿块在 5 cm 之内;患者及家属知情同意本研究并签订同意书。病例排除标准:非原发性乳腺癌;有局部复发或远处转移症状;伴有严重肝肾功能不全;患有精神疾病。

1.2 治疗方法

两组患者均行气管插管全身麻醉,采取仰卧位,将患侧肩关节适当外展。在乳房肿瘤边缘约 3 cm 处作横梭形、纵梭形切口,切口大小根据乳房形状、大小以及肿瘤的位置决定。

联合组采用前哨淋巴结活检术联合保乳治疗方式。前哨淋巴结活检术:麻醉成功后注射 1%亚甲蓝 2-4 mL 至乳腺肿瘤边

缘,注射后局部按压 15 min 左右以促进吸收;以切口 5 cm 在腋毛区下缘切开皮肤及皮下组织,腋窝方向潜行分离皮瓣,沿胸大肌外平行肌束寻找被染蓝的淋巴管,并沿着淋巴管由下至上、由内向外逐步向腋窝部寻找被染蓝的淋巴结,即为前哨淋巴结。将前哨淋巴结切除送快速病理检查,若结果为阴性则逐层缝合切口,若为阳性则改行腋窝淋巴结清扫术。保乳治疗:切口手术完成后,距肿瘤边缘 2 cm 左右将肿瘤完整切除,并标记上、下、左、右、基底切缘送快速病理检查,如果检查结果为阴性则用美容线将切口逐层缝合,如果为阳性则需扩大切除范围并再次送检,若该结果仍为阳性,则患者改行腋窝淋巴结清扫术。

对照组实施腋窝淋巴结清扫术。切口手术完成后,皮肤切除范围距离肿瘤约 3 cm,皮下潜行,手术范围从锁骨至腹直肌上段,外部由背阔肌前缘起、至内部胸骨旁,清除范围内乳腺腺体、脂肪淋巴组织,胸大小肌根据患者情况切除或保留。

1.3 观察指标

观察记录两组患者手术时间、总出血量、引流管拔除时间、总引流量并进行比较。对两组患者术后并发症情况包括上肢水肿、皮瓣坏死、皮下积液、并发症比例等作记录并进行比较。根据美国放射治疗联合中心 (Joint Center For Radiation Therapy, JCRT)标准对患者术后乳腺美容效果进行评估^[13]:① 优:两边乳房对称,乳头水平差距在 2 cm 之内,两侧乳房外形无差异且乳房皮肤正常;② 良:两边乳房对称,乳头水平差距在 3 cm 之内,两侧乳房外形基本正常,乳房皮肤颜色浅亮;③ 差:两边乳房不对称,乳头水平差距在 3 cm 之上,乳房外形明显缩小且皮肤粗糙。根据肩关节功能评分系统评价方法^[14]对患者术前和术后肩关节屈曲、外旋、内旋、后伸、外展功能的活动度进行测量评估。

1.4 统计学处理

本研究统计所得结果数据均采用 SPSS19.0 统计学软件进行处理分析,其中计数资料以(n,%)表示,采用 χ^2 检验。手术时间、总出血量、引流管拔除时间、总引流量等手术情况指标以及肩关节屈曲、外旋、内旋、后伸、外展活动度等肩功能指标水平均服从正态分布,以($\bar{x}\pm s$)表示,采用 t 检验。以 $P<0.05$ 表示差异有统计学意义。

2 结果

2.1 两组手术指标的比较

两组手术均完成顺利,联合组手术时间为(58.44±10.32) min,总出血量为(61.61±0.58)mL,引流管拔除时间为(5.18±1.47)d,总引流量为(100.35±20.75)mL,均明显低于对照组($P<0.05$),见表 1。

表 1 两组手术情况比较(n=50, $\bar{x}\pm s$)

Table 1 Comparison of the operation situation between two groups(n=50, $\bar{x}\pm s$)

Groups	Operation time (min)	Total amount of bleeding (mL)	Extraction time of drainage tube (d)	Total flow rate (mL)
Joint group	58.44±10.32 [#]	61.61±0.58 [#]	5.18±1.47 [#]	100.35±20.75 [#]
Control group	125.34±32.78	121.27±0.62	30.25±10.72	260.87±14.22

Note: compared with the control group, [#] $P<0.05$.

2.2 两组术后并发症发生情况的比较

手术治疗后,联合组上肢水肿 1 例、无皮瓣坏死、皮下积液 2 例, 并发症比例为 6%; 对照组上肢水肿 11 例、皮瓣坏死 2

例、皮下积液 6 例,并发症比例为 38%;联合组并发症比例明显低于对照组,差异有统计学意义($P<0.05$)。见表 2。

表 2 两组术后并发症的发生情况比较(n=50, %)

Table 2 Comparison of the incidence of postoperative complications between two groups (n=50, %)

Groups	Upper limb edema	Necrosis of skin flap	subcutaneous hydrops	Proportion of complications
Joint group	1	0	2	6.0/3 [#]
Control group	11	2	6	38.0/19

Note: compared with the control group, [#] $P<0.05$.

2.3 两组术后半年乳腺美容效果比较

手术治疗后,两组患者均随访 6 个月。乳腺美容效果联合

组优 32 例,良 18 例,无美容效果差患者,优良率为 100%。对照组优良率 74%,明显低于联合组($P<0.05$)。见表 3。

表 3 两组术后乳腺美容效果的比较(n=50, %)

Table 3 Comparison of the postoperative breast cosmetology between two groups (n=50, %)

Groups	Excellent	effective	Invalid	Superior rate
Joint group	32	18	0	50/100.0 [#]
Control group	21	16	13	37/74.0

Note: compared with the control group, [#] $P<0.05$.

2.4 两组术前后肩关节功能的比较

术前, 两组肩关节功能各指标水平比较差异不显著 ($P>0.05$)。手术治疗后,两组肩关节屈曲活动度、外旋活动度、后伸活动度、外展活动度相较于术前均明显降低($P<0.05$);联合组内

旋活动度相较于术前降低不显著($P>0.05$),而对照组内旋活动度相较于术前降低显著($P<0.05$)。术后,联合组肩关节屈曲活动度、外旋活动度、内旋活动度、后伸活动度、外展活动度均显著高于对照组($P<0.05$)。见表 4。

表 4 两组术前后肩关节功能水平的比较(n=50, $\bar{x}\pm s$)

Table 4 Comparison of the shoulder joint function between two groups before and after operation(n=50, $\bar{x}\pm s$)

Groups	Time	buckling mobility (°)	External rotation(°)	Internal rotation(°)	Extension activity(°)	Abduction activity(°)
Joint group	Before operation	169.89± 9.31	86.81± 5.83	86.75± 4.92	67.01± 5.83	172.75± 8.92
	After operation	151.91± 8.53 [#]	70.14± 4.11 [#]	84.94± 3.61 [#]	56.84± 4.11 [#]	138.54± 7.61 [#]
Control group	Before operation	172.84± 9.04	87.31± 4.92	87.32± 5.02	66.31± 5.22	174.32± 9.02
	After operation	133.92± 8.44 [*]	52.64± 3.84 [*]	80.02± 3.84 [*]	47.64± 3.92 [*]	109.08± 7.84 [*]

Note: compared with the preoperative, ^{*} $P<0.05$, compared with the control group, [#] $P<0.05$.

3 讨论

乳腺癌治疗方法以乳腺切除手术为主,需切除整个乳房并结合腋窝淋巴结常规清扫,虽可彻底清除肿瘤,有效控制肿瘤扩散,但全乳切除也对患者身心造成了巨大伤害,且会出现皮瓣组织坏死等并发症及肩关节功能损害^[15,16]。随着乳腺癌筛查水平的提高,早期确诊病例逐渐增多,为早期乳腺癌患者的手术治疗提供了有利条件^[17]。国内外研究^[18-22]表明早期乳腺癌患者应用保乳手术治疗,患者远期生存率以及局部和区域的肿瘤控制率与传统乳腺全切手术较接近,而且能在最大程度上保留患者的乳房形态,且有术后恢复快、并发症较少等优势,可显著提高患者乳房美容效果满意度及生活质量。腋窝淋巴结清扫术因手术创伤大,术中可能导致患者肩胛骨、肩关节相关神经、肌肉、血管暴露或切除,患者术后易出现上肢功能障碍、皮下积液等并发症,影响疗效及预后^[23-25]。而针对腋窝淋巴结阴性患者所

实施的前哨淋巴结清扫术则在极大程度上缩小了手术范围,可有效避免腋窝淋巴结清扫所造成的并发症,保留乳房^[26-30]。

本研究结果显示联合组手术时间、总出血量、引流管拔除时间、总引流量、并发症发生率均明显低于对照组,表明前哨淋巴结活检术联合保乳手术相较于传统腋窝淋巴结清扫术手术创伤更小且安全性更高,原因可能是术前前哨淋巴结活检定位准确,可对腋窝淋巴结的转移情况进行准确预测,从而可以尽早检测出癌细胞的转移并控制癌细胞蔓延。同时,联合保乳手术对患者创伤相对较小,应激影响较小,可有效缩短手术时间,因此有助于降低术中出血量、缩短拔管时间,对患者术后恢复起到良好的促进作用。本研究中,联合组术后乳腺美容效果明显高于对照组,表明前哨淋巴结活检术联合保乳手术对患者术后乳房美观效果有更好的保持作用。

本研究中,联合组术后肩关节屈曲活动度、外旋活动度、内旋活动度、后伸活动度、外展活动度均显著高于对照组,表明两

组手术均对患者肩关节功能造成不良影响,但是前哨淋巴结活检术联合保乳治疗对患者影响相较于腋窝淋巴结清扫明显降低。可能是因为前哨淋巴结活检术避免了腋窝淋巴结阴性患者进行不必要的腋窝淋巴结清扫,因而避免传统腋窝淋巴结清扫术带来的肩部功能障碍。

综上所述,前哨淋巴结活检术联合保乳治疗早期乳腺癌创伤小,美容效果明显,可显著降低术后并发症发生率并减轻对患者肩关节功能的损害,但远期疗效仍有待于进一步随访观察。

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(上接第 4324 页)

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