

双极电凝联合手术刀预防乳腺癌者围手术期心血管危险事件发生的价值

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摘要: **目的** 探讨双极电凝止血联合手术刀切割预防乳腺癌患者围手术期心血管危险事件发生的价值。**方法** 回顾性分析 2011 年 9 月到 2017 年 1 月在中山大学附属第八医院行乳腺癌根治术 182 例患者的临床资料,根据术中止血方法的不同分为观察组 100 例与对照组 82 例。观察组术中用手术刀进行切割,配合使用双极电凝止血;对照组切割皮肤使用手术刀,切割及止血使用电刀。观察两组预后,记录围手术期心血管危险事件发生情况。**结果** 两组手术时间、术中出血量对比无明显差异($P > 0.05$),观察组的术后拔管时间明显早于对照组($P < 0.01$)。观察组围手术期的皮下积液发生率(3.0% vs 11.0%, $P < 0.05$)明显低于对照组;淋巴水肿发生率稍低于对照组(1.0% vs 7.3%),但差异无统计学意义($P > 0.05$)。观察组围手术期的心血管危险事件发生率明显少于对照组(2.0% vs 12.2%, $P < 0.01$)。术后 1 个月观察组的生活质量评分中角色、躯体、认知、情绪、社会评分都明显低于对照组($P < 0.05$)。**结论** 双极电凝止血联合手术刀切割能有效预防乳腺癌者围手术期心血管危险事件的发生,减少皮下积液的发生,术后拔管时间提早,从而提高患者的整体生活质量。

关键词: 双极电凝; 手术刀; 乳腺癌; 心血管危险事件; 并发症

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Values of bipolar electrocoagulation combined with scalpel in preventing cardiovascular risk events of perioperative period in patients with breast cancer

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Abstract: **Objective** To investigate the values of bipolar electrocoagulation hemostasis combined with scalpel cutting in preventing the occurrence of cardiovascular risk events of perioperative period in patients with breast cancer. **Methods** A total of 182 patients who received breast cancer radical mastectomy in the Eighth Affiliated Hospital of Sun Yat-sen University from September 2011 to January 2017 were selected as research objects. According to the different methods of hemostasis during the operation, the patients were divided into observation group ($n = 100$) and control group ($n = 82$). Scalpel cutting cooperated with bipolar electrocoagulation hemostasis was used in observation group. Scalpel for cutting skin and electric knife for cutting and hemostasis were used in control group. The prognosis of patients in two groups was observed, and the cardiovascular risk events in two groups were recorded. **Results** There were no significant differences in operation time and intraoperative blood loss between two groups (all $P > 0.05$). The postoperative time to extubation in observation group was significantly earlier compared with control group ($P < 0.05$). The incidences of subcutaneous hydrops (3.0% vs 11.0%, $P < 0.05$) during perioperative period in observation group were significantly less than that in control group. The incidence of cardiovascular risk events of perioperative period was significantly less than that in control group (2.0% vs 12.2%, $P < 0.01$). The scores of role, body, cognition, emotion, society items for quality of life score at 1 month after operation in observation group were significantly less than those in control group (all $P < 0.01$). **Conclusion** Bipolar electrocoagulation hemostasis combined with scalpel cutting can effectively prevent the occurrence of perioperative cardiovascular risk events, decrease the occurrence of subcutaneous effusion, lymphedema and promote the postoperative extubation time early, so as to improve the overall life quality of the patients.

Key words: Bipolar electrocoagulation; Scalpel; Breast cancer; Cardiovascular risk events; Complications

12.2%, 观察组明显低于对照组 ($P < 0.01$)。见表 4。

2.5 生活质量对比 术后 1 个月观察组的角色、躯体、认知、情绪、社会等生活质量评分都明显低于对照组 ($P < 0.01$)。见表 5。

表 2 两组手术指标对比 ($\bar{x} \pm s$)

| 组别 | 例数 | 手术时间 (min) | 术中出血量 (ml) | 术后拔管时间 (d) |
|-------|-----|----------------|----------------|---------------|
| 观察组 | 100 | 155.33 ± 19.44 | 121.40 ± 21.94 | 2.76 ± 0.98 |
| 对照组 | 82 | 134.29 ± 15.30 | 109.39 ± 10.44 | 4.87 ± 0.22 |
| t 值 | | 7.980 | 4.551 | 19.097 |
| P 值 | | 0.000 | 0.000 | 0.000 |

表 3 两组围手术期常见并发症对比 例 (%)

| 组别 | 例数 | 皮下积液 | 淋巴水肿 |
|------------|-----|---------|--------|
| 观察组 | 100 | 3(3.0) | 1(1.0) |
| 对照组 | 82 | 9(11.0) | 6(7.3) |
| χ^2 值 | | 4.654 | 3.304 |
| P 值 | | 0.031 | 0.069 |

表 4 两组心血管危险事件对比 例 (%)

| 组别 | 例数 | 室性心律 失常 | 心绞痛 | 非致命性 心肌梗死 | 急性心力 衰竭 | 合计 |
|------------|-----|------------|-----|--------------|------------|----------|
| 观察组 | 100 | 1 | 0 | 1 | 0 | 2(2.0) |
| 对照组 | 82 | 3 | 2 | 3 | 2 | 10(12.2) |
| χ^2 值 | | | | | | 7.604 |
| P 值 | | | | | | 0.006 |

表 5 两组术后生活质量评分对比 (分, $\bar{x} \pm s$)

| 组别 | 例数 | 躯体 | 角色 | 认知 | 情绪 | 社会 |
|-------|-----|-------------|-------------|-------------|-------------|-------------|
| 观察组 | 100 | 1.52 ± 0.24 | 1.80 ± 0.43 | 1.77 ± 0.41 | 2.08 ± 0.45 | 1.97 ± 0.54 |
| 对照组 | 82 | 1.13 ± 0.21 | 1.32 ± 0.32 | 1.22 ± 0.46 | 1.28 ± 0.33 | 1.17 ± 0.37 |
| t 值 | | 11.533 | 8.381 | 8.522 | 13.409 | 11.398 |
| P 值 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

3 讨论

乳腺癌是女性常发生的恶性肿瘤之一, 占全部女性恶性肿瘤发病的 1/5 左右, 可严重威胁到女性的生命健康。目前普查筛查显示我国女性乳腺癌的发病率逐年上升, 并有明显年轻化的趋势^[11]。

当前手术治疗乳腺癌的主要方法为标准根治术与改良根治术, 但是在手术期间容易造成患者上肢的血液和淋巴循环障碍, 导致皮瓣坏死、上肢水肿、出血、积液等一系列并发症发生^[12-13]。电刀产生的高频高压电流通过高阻抗的组织时, 会在组织中产热, 使组织干燥, 从而离断组织, 起到切割和止血的目的。双极电凝通过电流加热使蛋白凝固达到血管闭合, 并且由于双极电凝的叶片绝缘, 仅使得两镊尖的组织受到电流的热效应作用, 可对周围组织有很好的保护作用^[14-15]。本研究显示两组手术时间、术中出血量对比无明显差异, 不过观察组的术后拔管时间明显早于对照组, 表明双极电凝联合手术刀的应用并不增加手

术难度, 且能促进术后早拔管。

乳腺癌的根治手术中容易出现皮下积液、淋巴水肿等情况, 发病原因跟患者的血糖、营养状况、皮瓣张力、皮下积液瘀血、电刀电流过大、皮瓣厚薄不均等多种因素有关^[16-17]。除了患者的自身条件外, 在围手术期间可控的因素包括皮瓣的游离和术后的引流及包扎^[18]。在电刀使用过程中, 产生的高温在凝血或切割的同时, 也会对周围正常组织产生一定的影响, 形成炎性渗出, 导致并发症的发生^[19]。本研究显示观察组围手术期的皮下积液发生率明显低于对照组, 淋巴水肿发生率较对照组有所降低, 主要在于双极电凝的叶片绝缘, 仅在两镊尖之间传导电流, 对周围组织有保护作用; 并且精细的操作对小血管也有良好的止血作用, 可减少组织液的渗出, 从而减少皮下积液与淋巴水肿的发生率^[20]。

当前外科手术引发的心血管危险事件日益得到重视, 而外科手术的宗旨是强调术后恢复及减少并发症, 而在皮瓣游离时, 手术刀的操作基本上都是凭经验及手感进行盲切, 可破坏真皮下血管网, 也可能因为电流过大而破坏了血管网, 造成心血管疾病的隐患^[21-22]。本研究显示观察组围手术期的室性心律失常、心绞痛、非致命性心肌梗死、急性心力衰竭等心血管危险事件发生率明显少于对照组, 表明双极电凝联合手术刀能有效预防乳腺癌者围手术期心血管危险事件的发生。从机制上分析, 观察组在游离薄皮瓣时使用的是电刀的低档位低电流, 游离范围比较集中, 不会对真皮下血管网产生影响, 也较好地保护了皮瓣的血供^[23-25]。同时本研究显示术后 1 个月观察组的角色、躯体、认知、情绪、社会等生活质量评分都明显低于对照组, 也表明双极电凝联合手术刀的应用能提高患者的术后整体生活质量。

总之, 双极电凝联合手术刀能有效预防乳腺癌根治术围手术期心血管危险事件的发生, 减少皮下积液的发生, 促进术后拔管时间提早, 从而提高患者的整体生活质量。

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