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·临床研究·

桡动脉掌浅支腕横纹游离皮瓣修复治疗手部创伤的临床效果

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[摘 要] **目的** 探讨桡动脉掌浅支腕横纹游离皮瓣修复治疗手部创伤的临床效果。**方法** 回顾性分析2013年1月至2015年12月在我院诊治的100例手部创伤患者的临床资料。所有患者均采用桡动脉掌浅支腕横纹游离皮瓣修复治疗;观察患者术后皮瓣坏死率、存活情况、感染率;所有患者术后均进行6个月的随访,通过X射线检查骨折愈合情况,对手功能恢复情况进行评估。**结果** 9例患者皮瓣局部坏死,坏死率为9%;10例患者出现局部感染,感染率为10%,经换药以及对症处理后,感染被有效控制,皮瓣均得以存活;81例患者皮瓣轻微肿胀,外观良好,色泽接近于原手指皮肤的颜色。对100例患者随访6个月显示上皮化全部成功;X射线检查显示骨折愈合情况良好;有7例出现钩甲畸形,5例出现指甲再生缓慢。手功能恢复情况:73例优(73%),16例良(16%),11例中(11%)。**结论** 桡动脉掌浅支腕横纹游离皮瓣修复治疗手部创伤皮瓣存活率较高,手功能恢复情况好。

[关键词] 皮瓣修复;桡动脉掌浅支;手部创伤;临床效果

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Clinical effect of treatment for hand trauma with free flap of radial artery superficial palmar branch

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Abstract: Objective To investigate the clinical effect of the treatment for hand trauma with free flap of radial artery superficial palmar branch. **Methods** Selected 100 cases of patients with hand trauma who were treated in our hospital from January 2013 to December 2015. All the patients were treated with free flap of radial artery superficial palmar branch. The postoperative necrosis rate,survival rate,and infection rate of flap of all the patients were observed. All the patients were followed up for 6 months,and the healing of fracture were evaluated by X-ray examination so as to evaluate the hand function recovery. **Results** After the treatment,there were 9 cases of flap local necrosis and 10 cases of local infection,and the necrosis rate and infection rate were 9% and 10% respectively. The infection was controlled effectively after the symptomatic treatment and the flaps all survived. The swelling degree of skin flap was slight and the appearance was good. After 6 months of follow-up, the 100 cases all get epithelization completely. The X-ray examination showed that the fracture healing is good,with 7 cases of hook nail deformity and 5 cases of slow nail regeneration. The hand function recovery was excellent in 73 cases (73%),good in 16 cases (16%),and medium in 10 cases (10%). **Conclusion** It is an effective treatment for hand trauma with free flap of radial artery superficial palmar branch,as it can receive high flap survival rate and good recovery of hand function.

Keywords: repair of skin flap;radial artery superficial palmar branch;hand trauma;clinical effect

手部组织解剖结构复杂,通常手部创伤均伴有关节、骨及肌腱外露组织的严重受损。手部损伤后采取及时、正确的手术治疗是手功能恢复的关键[1]。设计移植皮瓣修复损伤是目前临床对于手部创伤的主要治疗技术,主要包括邻指皮瓣、推进皮瓣和指动脉背侧支皮瓣等[2]。随着社会的不断发展,人们逐渐对移植皮瓣修复提出了更高的要求,要求兼顾功能和美观。我院2013年1月至2015年12月对100例手部创伤患者采用桡动脉掌浅支腕横纹游离皮瓣修复治疗,取得了满意的临床效果,现报告如下。

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1 资料与方法

1.1 临床资料

本组100例手部创伤患者,其中男73例,女27例;年龄18~53岁,平均(35.79±2.16)岁。损伤后至手术时间2~13 h,平均(6.75±3.28)h。致伤原因:电锯伤23例,电刨伤51例,切割伤13例,电烧伤3例,挤压伤7例,车祸伤3例。致伤部位:左手31例,右手69例,均为手指伤伴有骨折,其中食指41指,拇指16指,中指27指,小指7指,无名指9指;皮肤缺损面积1.1 cm×2.0 cm~1.4 cm×2.6 cm。本研究获得我院伦理委员会批准,患者均签署知情同意书。

1.2 方法

100 例患者均采用桡动脉掌浅支腕横纹游离皮瓣修复进行治疗。手术参照郑大伟等[4]的操作方法:患者平卧位,给予臂丛神经阻滞麻醉后,在气囊止血带下进行手术操作。首先彻底清创,对于合并出现肌腱、指骨骨折、神经或者血管损伤者,根据患者具体的受伤情况采用骨折复位克氏针内固定。然后设计皮瓣的点、线和面。由桡动脉掌浅支(即皮瓣设计的关键点)自手舟骨结节分支位置进入到皮瓣中;在患者的腕横纹与手舟骨结节之间作一平行线(即皮瓣纵轴线);将穿皮点作为皮瓣中心,逐步扩大缺损面积对皮瓣进行设计。皮瓣的切取:切开皮瓣的近侧,以确保皮下静脉的长度足够,剪切结扎,使桡动脉充分暴露,然后将显露的掌浅支进行分离,顺沿设计线切口皮瓣边缘,切下皮瓣,最后对患者受伤部位以及皮瓣边缘缝合,于显微镜下仔细观察指背皮下静脉和皮瓣静脉之间的吻合情况是否良好,进行止血后,缝合切口。

1.3 观察指标

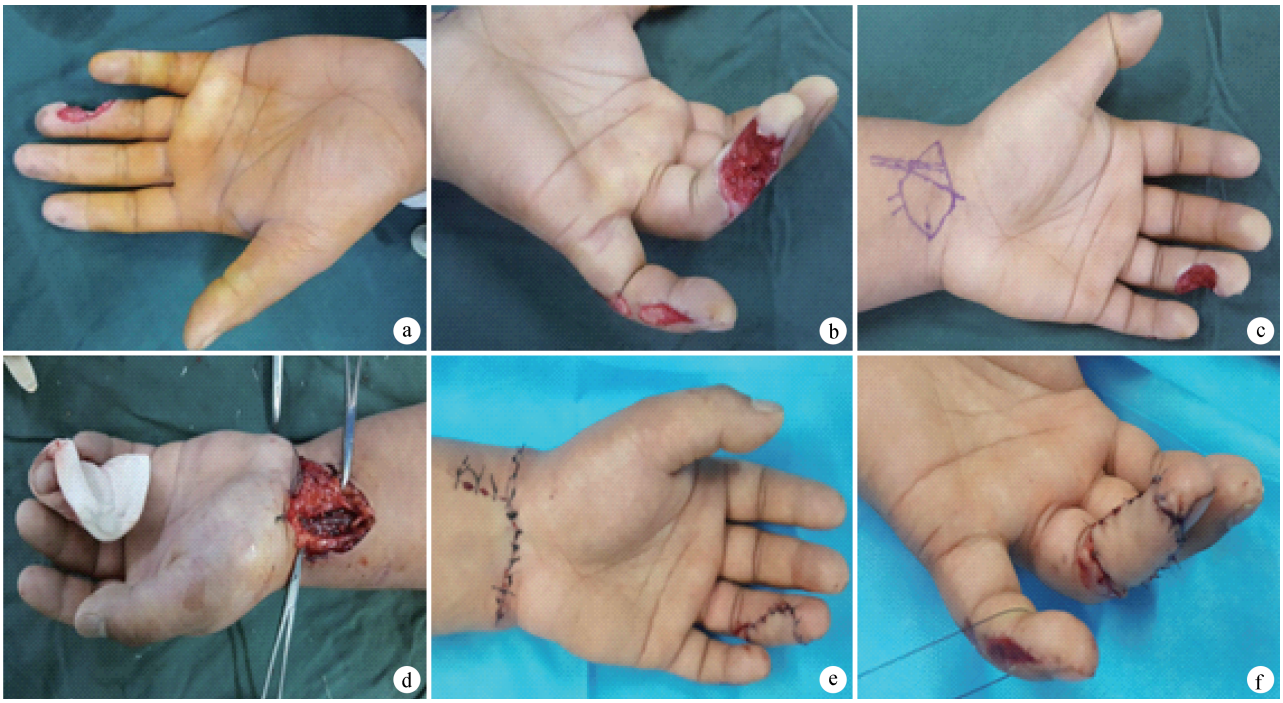
观察患者术后皮瓣坏死率、存活情况、感染率;术后进行 6 个月的随访,通过 X 射线检查患者的骨折愈合情况,对患者的手功能恢复情况进行评估[3]:优,表示患者经过治疗后活动范围与健侧相比恢复到正常水平;良,表示患者经过治疗后总体活动度大于健侧活动度的 75%;中,表示患者经过治疗后,总体活动度大于健侧活动度的 50%;差,表示患者经过治疗后总体活动度小于健侧活动度的 50%。其中总体活动度 = 总关节屈曲度之和 - 各关节伸直受限之和。

1.4 统计学分析

采用 SPSS 15.0 软件,计量资料以均数 ± 标准差($\bar{x} \pm s$)表示,组间比较用 t 检验,组内比较用方差分析,组间率的比较用 χ^2 检验,以 $P < 0.05$ 为差异有统计学意义。

2 结果

9 例患者术后皮瓣发生局部坏死,皮瓣坏死率为 9%;10 例患者出现感染,感染率为 10%,经换药以及对症处理后,感染被有效控制,皮瓣均得以存活;81 例患者皮瓣轻微肿胀,外观良好,色泽接近于原手指皮肤的颜色。随访 6 个月显示 100 例患者上皮化全部成功,X 射线检查显示骨折愈合情况良好;有 7 例出现钩甲畸形,5 例出现指甲再生缓慢;手功能恢复情况:73 例(73%)优,16 例(16%)良,11 例(11%)中。典型病例:患者,男,27 岁。机械夹伤,左手环指远指间关节尺侧约 1.5 cm × 2.5 cm 的缺损,骨质外露(图 1a、b),行桡动脉掌浅支腕横纹游离皮瓣修复术,依次吻合掌浅支与指动脉及相应静脉、修复创面(图 1c、d),手术效果满意(图 1e、f)。



a、b:术前见皮肤 1.5 cm × 2.5 cm 的缺损,骨质外露;c:设计皮瓣,标记神经血管走行;d:吻合静脉;e、f:伤口缝合后

图 1 典型病例患者桡动脉掌浅支腕横纹游离皮瓣修复术过程

3 讨论

手部组织是人体除面部之外的另一个暴露部位,其解剖结构较为复杂和精细,出现缺损后较难复原,加上手部具有重要的社交功能,患者普遍对治疗结果存在较高的期望值,是手外科医生面临的重要难题[5-6]。临床对于手指创面具有多种修复方法,采取皮瓣修复软组织缺损是比较常见的一种方法。主要包括邻指皮瓣、推进皮瓣和指动脉背侧支皮瓣等,由于皮瓣供区常常位于腕部和手指位置,会对手指的功能和外观造成一定程度的影响。传统的腹部带蒂皮瓣尤其是髂腹股沟皮瓣具有安全、实用的优点,但是需患者强制体位,且需二期手术进行治疗,还有皮瓣臃肿等缺点;而如果采用尺动脉支皮瓣或者前臂桡动脉等部位进行修复,会出现暴露伤处、皮瓣的质地较差、手术不能处于同一观察视野等问题[7-10]。

近年来,随着显微外科技术以及皮瓣解剖学研究的不断深入,通过利用微创显微外科技术切取皮瓣对手部软组织缺损进行修复,能有效实现术后手功能良好、外形美观以及供区损伤小的目标。游离皮瓣修复软组织缺损具有对供区损伤破坏较轻、术后各种临床指标恢复良好等优点。自 2003 年 Sakai[11] 首次采用桡动脉掌浅支皮瓣移植对手指创面进行修复治疗,越来越多的手外科医生开始使用此种手术方式。采用桡动脉掌浅支腕横纹部位进行皮瓣修复能显著改善患者的各种临床症状和表现,其创面较小,不存在皮瓣臃肿、创面外露等缺点,使皮瓣的存活率大大提高,并且患者术后手指功能恢复良好。本组患者均采用桡动脉掌浅支腕横纹游离皮瓣修复治疗,结果显示皮瓣存活率较高,肿胀程度轻微,外观良好,X 射线检查显示骨折愈合情况良好,且手功能恢复情况好,临床治疗效果显著。郑大伟等[12] 选择 9 例手指创面患者作为研究对象,进行桡动脉掌浅支腕横纹皮瓣游离移植修复缺损治疗,术后患者的皮瓣均全部成活,供区切口以及创面均Ⅰ期愈合,表明桡动脉掌浅支腕横纹游离皮瓣具有术后外观以及功能恢复良好的优点,是有效修复手指创面一种方法。刘建标[13] 选择 20 例(20 指)手部创伤患者作为研究对象,采用桡动脉掌浅支腕横纹游离皮瓣修复治疗,结果显示,20 例患者的上皮化全部成功,经 X 射线检查发现骨折愈合情况良好,表明采用桡动脉掌浅支腕横纹游离皮瓣修复治疗手部创伤患者具有简单易行,术后患者手功能恢复好以及皮瓣存活率高的优点。本研究与上述结果一致,表明动脉掌浅支腕横纹游离皮瓣修复治疗手部创伤的手术操作较为简便,不仅可以有效提高皮瓣的存活率,保持良好的手指外观,恢复手指感觉,还可以有效降低并发症的发生,具有较高的安全性及临床应用价值。

在进行桡动脉掌浅支腕横纹游离皮瓣修复治疗时应注意的事项:①术前应先采用彩色多普勒血流探测仪对患者进行常规的术前检查,以确定血管的具体位置,并根据血管的走向设计皮瓣,若患者缺失患侧的桡动脉掌浅支,则应当取健侧腕掌部位置的游离桡动脉掌浅支皮瓣进行治疗;②由于指固有动脉和皮瓣穿支的直径较短且细,患者如果为老年人且有高血压或者动脉硬化等血管疾病,进行皮瓣移植后极易发生血管危象,应禁止采用桡动脉掌浅支腕横纹游离皮瓣修复治疗;③术中在缝合供区之前,应首先进行较为彻底的止血,当皮瓣稳定后应当及时将石拆除膏,并且加强锻炼腕关节的功能,以预防发生腕管综合征;④术后应密切观察患者的皮瓣血运情况,如果发现血管危象,应当及时进行处理;⑤术后应加强抗凝、抗感染以及抗痉挛治疗[14-15]。

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·临床研究·

先天性房间隔、室间隔缺损的经胸微创封堵治疗

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[摘 要] **目的** 评估在食道心脏超声引导下经胸微创封堵先天性房、室间隔缺损的疗效及安全性。**方法** 回顾性分析2013年9月至2015年6月贵阳中医学院第二附属医院收治的44例经胸微创封堵心脏房、室间隔缺损患者的临床资料。所有患者术中经食管超声心动图监测并引导封堵伞的放置,评价手术效果,术后门诊定期随访患者心电图、超声心动图。**结果** 44例患者中43例先天性间隔缺损(室缺28例,房缺16例,其中1例为室缺合并房缺患者)封堵成功,1例室缺患者中转为心内直视手术。手术时间22~48 min,手术切口2~4.5 cm,术后呼吸机辅助时间1~5 h,术后引流量小于50 mL,术后住院时间2~6 d。所有患者均治愈出院。出院病例随访1~12个月,封堵器位置良好,无残余分流,无封堵术导致的瓣膜返流及心律紊乱。**结论** 在食道心脏超声引导下经胸封堵手术治疗先天性房、室间隔缺损具有微创、简便、安全、恢复快等优点,近期随访疗效满意。

[关键词] 房间隔缺损;室间隔缺损;微创;外科封堵术;心脏超声

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Transthoraic mini-invasive surgical occlusion of atrial and ventricular septal defects

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Abstract: Objective To investigate the efficacy and safety of transthoracic minimally invasive occlusion operation guided by transesophageal echocardiography for the treatment of congenital atrial or/and ventricular septal defects (ASD/VSD). **Methods** The clinical data of a total of 44 patients who underwent surgical occlusion operation from September 2013 to June 2015 were summarized. The whole course of occlusion procedure were dynamically monitored and guided by transesophageal echocardiography. All the patients were followed up regularly by electrocardiogram and echocardiograph. **Results** Among the 44 patients, 43 patients (28 VSDs and 16 ASDs, including one patient suffered with VSD and ASD simultaneously) were occluded successfully, and the other patient with VSD who failed in the surgery was converted to open heart repair. The occlusion operations were finished within 22 to 48 min. The length of incision spaned from 2 to 4.5 cm. The ventilator was used for 1 to 5 hours. The total drainge volumes were recorded each patient from 0 to 50 mL. The postoperative hospitalization stay was 2 to 6 days, and all patients survived and were discharged. During the follow-up of 1 to 12 months, there was no cases with A-V conduction block, valve incompetent, cardiac arrhythmia and residual shunt of heart septel defect. **Conclusion** Transthoraic mini-invasive surgical occlusion of atrial and ventricular septal defects is a therapeutic method with less trauma, higher safety and feasiblity, faster recovery,

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