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·畸形与变异·

桡动脉掌浅支异常粗大1例

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Abnormal coarseness of surperficial palmar branch of radial artery:one case report

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[关键词] 遗传;变异;穿支皮瓣;桡动脉掌浅支
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随着对桡动脉掌浅支解剖学基础研究的进一步深入,桡动脉掌浅支腕横纹穿支皮瓣在临床的应用也逐渐增多。桡动脉掌浅支的解剖存在一定的变异,主要有高位掌浅弓变异、桡动脉掌浅支高位起始变异或桡动脉掌浅支起始点以近存在高位独立分支[1],但鲜有桡动脉掌浅支管径异常粗大的报道。笔者在临床手术中发现1例桡动脉掌浅支管径异常粗大的病例,既往未见管径超过3.0 mm的桡动脉掌浅支的报道。此变异的发现提示,若腕部桡动脉主干的离断或缺损无法修复时,可用异常粗大掌浅支代替主干或桥接,这对于避免医源性损伤有重要意义。

1 方法与结果

患者男性,45岁,2018年5月6日以"右示指中节完全离断"收治于我院骨科中心,行急诊清创再植手术,术后再植指顺利成活。出院后5个月余因再植指创面伴有渗出再次就诊,以"右示指再植术后继发掌侧面缺损"入院,专科查体情况:再植示指肤色红润、毛细血管反应阳性、远节指腹张力适中、皮温正常,中节掌侧面有1.5 cm×1.6 cm缺损区,屈肌腱缺损1.2 cm、指骨缺损1.1 cm,仅部分背侧骨皮质相连。于2018年11月8日在臂丛麻醉下拟行游离桡动脉掌

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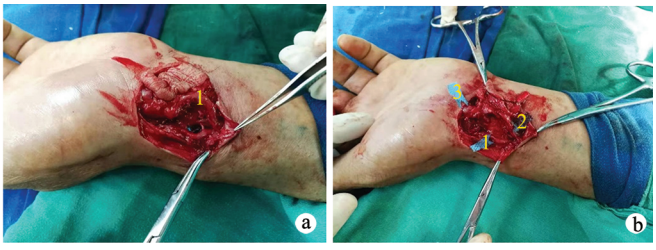
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浅支腕横纹穿支皮瓣携带掌长肌腱修复创面,术中切取皮瓣时见桡动脉掌浅支自桡骨茎突腕横纹近侧处2.0 cm发出,管径粗大约3.3 mm,于腕部呈迂曲状,走行于皮瓣中,起始处约3.5 mm与桡动脉主干管径(3.5 mm)相近,继续向手掌走行于远侧掌横纹皮下处约3.2 mm(图1),腕横纹皮支细小不明显,掌浅支管径是受区指固有动脉管径的3.0~3.5倍,吻合极为困难,且考虑切取后对手部血供影响偏大,放弃游离桡动脉掌浅支腕横纹穿支皮瓣,改行指固有动脉近节背侧支穿支皮瓣移植。手术过程顺利,手腕处桡动脉掌浅支腕横纹皮瓣原位缝合,移植皮瓣顺利成活,伤口愈合良好,缺损肌腱及指骨二期修复。



a:桡动脉掌浅支于腕掌部迂曲、变异(1:桡动脉掌浅支异常粗大,呈迂曲状,走行于皮瓣中);b:桡动脉掌浅支于腕掌部行径(1:桡动脉主干,2:桡动脉掌浅支起始处,3:桡动脉掌浅支远侧腕横纹处并且进入鱼际)

图1 左桡动脉掌浅支从桡骨茎突上2.0 cm掌尺侧桡动脉发出

2 讨论

1993年由Kamei等[2]报道的桡动脉掌浅支大鱼际处纵行皮瓣转移,为桡动脉掌浅支腕横纹穿支皮瓣(surperficial palmar branch of radial artery,SPBRA)游离移植奠定雏形。直到2003年,SaKai[3]才真正开展SPBRA游离移植,将近原大鱼际处纵行皮瓣改成腕横纹处横行皮瓣,术后瘢痕与腕横纹结合不易察觉,外形佳。2013年国内赵民等[4]首先解剖38只上肢标本,于34只标本桡动脉掌浅支灌注1%龙胆紫溶液来探寻其解剖路径,证明桡动脉掌浅支起始与走行较为恒定,管径与指动脉管径相似,这为游离SPBRA提供了临床解剖学基础。游离SPBRA近些年在国内迅速发展,为修复手部小面积缺损推崇的方法[5]。但游离SPBRA也存在桡动脉掌浅支变异,既往文献报道变异有桡动脉掌浅支和尺动脉终末支未吻合成弓(分布手掌的桡侧和尺侧)、桡动脉掌浅支缺如或过于细小(0.2~0.3 mm)、桡动脉掌浅支粗大(2.0 mm)合并行径迂曲伴有分支异常[4-6]。王友华等[7]的解剖研究认为,桡动脉掌浅支分3型:Y型,掌浅支只有1支,平均管径为1.1 mm,然后分为2条分支进入鱼际肌筋膜;H型,掌浅支分为2支,平均管径为1.0 mm,2条分支之间互相交通;优势型,掌浅支于起始处的管径>2.0 mm,其中最粗不超过3.0 mm,仍较本病例动脉血管细,但理论上灌注标本的动脉血管管径应较人体实际数值更大。本例桡动脉掌浅支异常粗大,超出3.0 mm,既往文献未见报道,实属罕见。

本例桡动脉掌浅支解剖变异具有如下特点:①桡动脉掌浅支异常粗大,管径约3.3 mm,与桡动脉主干管径相似,犹如主干延续,供血易分流或窃血;②腕横纹皮支细小不明显,考虑腕掌侧皮肤由桡动脉掌浅支直接供血;③两侧伴行静脉均粗大,管径2.5~2.8 mm,行径迂曲,与变异粗大的动脉一起穿过腕横纹皮肤处;④腕横纹皮肤处静脉怒张明显,动脉搏动明显,尤其是远侧腕横纹进入鱼际处。因此,术前如遇腕部浅静脉怒张明显,粗大在2 mm以上,桡动脉掌浅支于远侧腕横纹进入鱼际处搏动明显,则考虑为此种桡动脉掌浅支异常粗大变异。多普勒血管探测,如发现与近腕横纹处有两处相同的峰值搏动点,声音分贝相近,则考虑为此变异;多普勒于腕横纹皮瓣处偏桡侧舟状骨结节处探寻穿支,如果穿支峰值搏动点高、声音大,也考虑为此变异。若发现此变异,则需改行其他手术方案,以避免不必要的医源性手术损伤。

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