

CEA两种不同手术切口的对比

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摘要

颈动脉狭窄(carotid artery stenosis, CAS)是导致脑卒中的常见病因之一, 其中主要病因是动脉粥样硬化, 约占90%以上, 自20世纪90年代开始, 颈动脉内膜剥脱术(Carotid Endarterectomy, CEA)即被视作治疗颈动脉狭窄、预防脑卒中的金标准。该手术较多采用经胸锁乳突肌前缘切口入路, 该入路可充分显露颈动脉区, 但术后切口处神经、血管损伤较为常见, 切口的疤痕也给部分病人带来不同程度心理影响。近些年临床实践逐渐采用沿皮纹横切口, 发现该切口并不影响手术安全性与有效性, 还可减少术后疼痛与麻木, 增加切口美观性。对比CEA两种不同切口, 分析其术后并发症与远期生活质量的相关性。本文对CEA两种手术切口进行综述。

关键词

颈动脉狭窄, CEA, 切口对比

Comparison of Two Different Operative Incisions for CEA

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Abstract

Carotid artery stenosis (CAS) is one of the common causes of stroke, and the main cause is atherosclerosis, accounting for more than 90%, and carotid endarterectomy (CEA) has been regarded as the gold standard for the treatment of carotid artery stenosis and stroke prevention since the 90s of the 20th century. The transsternocleidomastoid muscle anterior edge incision approach is mostly used in this operation, which can fully expose the carotid artery area, but nerve and blood vessel damage at the postoperative incision site is more common, and the scar of the incorporeality also

brings varying degrees of psychological impact to some patients. In recent years, clinical practice has gradually adopted transverse incision along the striae, and it has been found that this incision does not affect the safety and effectiveness of surgery, and can also reduce postoperative pain and numbness, and increase the aesthetics of the incision. The correlation between two different incisions of CEA and long-term quality of life was analyzed. This article reviews two types of surgical incisions for CEA.

Keywords

Carotid Artery Stenosis, CEA, Incision Contrast

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1. 颈动脉狭窄发病机制

脑血管病以缺血性卒中最为常见, 约占全部脑血管病的 80%~85% [1]。高血压、高血脂、吸烟等各种危险因素通过不同途径影响血管内皮细胞、平滑肌细胞和炎症细胞, 促进动脉粥样硬化斑块的形成和发展。使得颈内动脉狭窄是缺血性脑卒中的常见病因, 占有脑卒中的 15%~20% [2]。颈动脉分叉区为颈动脉粥样硬化斑块的好发部位, 粥样斑块导致血管管腔的狭窄、闭塞, 导致脑血流灌注不足, 早期主要表现为反复的一过性脑缺血(Transient ischemic attack, TIA)发作, 随着狭窄程度的加重, 随时可能发生脑梗死, 导致单侧大脑血管供血中断、偏瘫甚至死亡。1953 年美国医生 DeBakey 为一位卒中患者成功实施了第一例颈动脉内膜剥脱术[3] [4]。

2. 两种不同手术切口

2.1. CEA 经典经胸锁乳突肌斜前缘纵向切口

CEA 经典经胸锁乳突肌斜前缘切口, 优点在于入路简单, 切口符合颈动脉自然走行, 对于颈动脉分叉较高或较低的病人可向上下延长。为手术过程中能够较好显露颈动脉分叉区, 术后可经血管彩超定位颈动脉分叉区与病变区域并标记[5]。很多学者研究表明, CEA 胸锁乳突肌前缘纵向切口术后疼痛、麻木常见, 恢复较慢, 颈部切口及疤痕增生较暴露, 影响美观[6]。但有的学者认为沿皮纹横切口与胸锁乳突肌斜切口在手术安全性和疗效无差别, 病人在美观满意度亦无明显差别。过长的胸锁乳突肌前缘纵向切口的面神经下颌缘支麻痹的发生率 0.4%~12%, 该神经从腮腺的下缘进入颈部, 与下颌角的肌肉和下唇部走向平行, 是最常损伤的颅神经[7]。故临床中颈动脉狭窄位置较高的切口, 常延长至乳突尖后, 向后方呈“S”型延长。迷走神经的分支之一喉返神经, 也容易受到损伤, 喉返神经损伤可引起声音嘶哑及吞咽困难。报道显示, CEA 术后喉返神经损伤的发生率在 1.2%~7%。文献报道舌下神经损伤的发生率为 2.2%~10.7%, 单侧舌下神经麻痹时伸舌舌尖偏向患侧, 双侧舌下神经麻痹者则表现为不能伸舌[7]。Durham 和 Harrison 研究指出, 一般情况下术中极少损伤喉上神经内侧支, 但易损伤喉上神经外侧支。Furlan 等认为, CEA 后喉上神经外侧支损伤发生率为 1.0%~4.5% [8]。Whitfield 等通过解剖实验的成果认为, 术中只要分离喉上神经外侧支即有可能造成损伤, 因此不建议术中常规显露[9]。

2.2. 沿皮纹横切口

沿皮纹横切口的优点在于切口隐蔽, 满足了近年来患者对于手术切口美观性的诉求, 极大的减轻了

患者对于术后的心理需求。且沿皮纹横切口与颈部的皮神经的走形方向一致,可以尽量减少皮神经损伤导致出现术后切口周围麻木的并发症[7]。研究表明,在不超过 5 cm 的短切口下施行 CEA,手术也可安全、有效完成手术,而且并未增加对脑神经的损伤,也没有影响手术操作安全[9]。但即使在术前彩超精确定位及排除颈动脉过高分叉情况下,沿皮纹横切口的切口延长率仍较高。可见在颈动脉分叉较高的病人中,横切口对于颈动脉分叉区的显露不如胸锁乳突肌前缘斜切口,在术中如需延长切口时胸锁乳突肌前缘斜切口也可根据显露需要向更高或更低位置延长切口,故灵活性较强,但沿皮纹横切口向两端的延长对于手术的效果无明显差异[5]。虽然缝合时使用可吸收线皮内缝合切口,术后免于拆线,大大的减少了住院时间,平均住院天数可减少至 3~5 天[10],该切口的选择也较美观,但同时也不利于皮下渗血排出,在一定程度上也增加术区血肿形成机会,增加了对于喉上神经等组织的压迫,出现声音变化等术后并发症[11]。沿皮纹横切口则沿颈部皮纹切开,能保持美观,但暴露范围有限,不太适用于病变范围广或需要使用转流的病人。沿皮纹横切口与经胸锁乳突肌斜前缘切口的也选择取决于医生的熟练水平和患者颈动脉解剖结构的个体差异[6]。

3. 讨论

部分研究表明,沿皮纹横切口在解剖到颈阔肌层后与经胸锁乳突肌斜前缘切口并无差别,术式选择主要由病情决定,沿皮纹横切口下行外翻式、补片式以及其他颈动脉手术术式操作均可成功施行,所以沿皮但沿皮纹横切口不会限制手术方式的选取和延长手术时间[12]。虽上文部分研究表明沿皮纹横切口可减少术后切口周围麻木,但 Kazimierczak 等研究却显示横切口术后皮神经损伤导致的切口麻木感发生率更高一些。这或许与横切口手术对皮肤牵拉更剧烈有关[13]。但从远期来看,两种不停切口术后麻木感并无明显差异,这或许是大部分术中牵拉导致的神经损伤是暂时的,一般在术后 6 月内可以恢复[14]。如果相同的手术视野暴露的情况下,Kobayashi 将颈动脉分叉分为三类:C2~C3 之间甚至更高称为高分叉;C3~C4 之间称为标准颈动脉分叉;C4~C5 之间及以下称为低分叉。结合颈动脉分叉手术风险程度,将颈动脉分叉以颈椎为界,分为高风险的颈动脉分叉(C2~C3 之间甚至更高)和低风险的颈动脉分叉(C3 以下)。如病变的颈动脉分叉范围在低风险区,即在 C3~C4 之间及以下[15]的情况下,沿皮纹横切口比纵向切口更加美观,我们优先使用沿皮纹横向切口。但是对于颈动脉高骑位分叉或长段狭窄的患者,横向切口则暴露比较困难,此时应采用胸锁乳突肌斜前缘切口[16]。有报道指出,术中准确解剖并识别神经、仔细解剖并分离动脉壁、轻柔的牵拉血管与神经、仔细并彻底的止血等可以减少术后颅神经损伤的发生率[17]。手术时间过长和术中使用补片等会增加颅神经损伤发生率[17]。国家卫健委脑卒中防治工程委员会组织专家编写的《中国脑卒中防治指导规范(2021 年版)》,为 CEA 的提供了最新的理论与操作指导。因此我国的该手术的研究仍有很大进步。与发达国家相比,我国 CEA 开展较晚,远未普及。仅在美国,每年即有超过 10 万例患者行 CEA [18]。通过该综述与国内外学者的研究表明,经典经胸锁乳突肌斜前缘切口与沿皮纹切口两种不同的手术切口对于疾病的诊疗与术后并发症的发生率各有优缺点,但仍需在术前对患者进行整体的评估,做到对每一个患者的个体化的治疗方案。

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