

冠状 - 睑下缘 - 口内联合切口手术治疗眶 - 上颌 - 颧骨复合骨折 *

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摘要 目的 探讨经冠状 - 睑下缘 - 口内联合切口行眶 - 上颌 - 颧骨复合骨折坚强内固定术的临床应用价值。方法 回顾性分析 69 例患者经冠状 - 睑下缘 - 口内联合切口行眶 - 上颌 - 颧骨复合骨折解剖复位,钛板坚强内固定。结果 69 例均一期愈合,68 例治疗效果优良,1 例治疗效果欠佳 2 例轻度睑外翻,两周后恢复正常,无额纹变浅、面神经损伤等其他并发症。结论 冠状 - 睑下缘 - 口内联合切口具有切口隐蔽、面部疤痕不明显、显露充分、并发症少等优点,是治疗眶 - 上颌 - 颧骨复合骨折的良好手术进路。

关键词: 联合切口 眶 - 上颌 - 颧骨骨折 坚强内固定

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Application of Coronal-Subciliary-Intraoral Incision Approach in the Treatment of Orbital-Maxillary-Zygomatic Complex Fractures*

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ABSTRACT Objective: To discuss the application of coronal-subciliary-intraoral incision approach in the treatment of orbital-maxillary-zygomatic complex fractures. **Methods:** We retrospectively reviewed 69 patients who underwent repositioning of orbital-maxillary-zygomatic(OMZ) complex fractures with approach of coronal- subciliary-intraoral incision. Fractures were reduced and fixed with titanium-plates. **Results:** All cases had been restored with primary healing. The results of 68 cases were excellent. Two cases were found having slight ectropion, but the symptom was disappeared after two weeks. No other complications had been found. **Conclusion:** The coronal-subciliary-intraoral incision has the merits of hidden incision, indistinct scar, enough exposure and low complication. It is a good surgical approach for the treatment of orbital-maxillary-zygomatic(OMZ) complex fractures.

Key Words: Coronal-subciliary-intraoral incision; Orbital-maxillary-zygomatic (OMZ) complex fracture; Rigid internal fixation

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随着交通事故的日益增加,颌面部创伤并颌中份骨折的病人越来越多,眶 - 上颌 - 颧骨(Orbital Maxillary Zygoma, OMZ)复合骨折可造成面部畸形以及张口受限、咬合紊乱、复视等功能障碍,治疗复杂,术后形态和功能恢复不理想,治疗不当可继发畸形^[1-5]。本研究采用头皮冠状切口联合睑下缘、口内前庭沟切口行 OMZ 骨折坚强内固定术,改进手术方式,减少该术式的并发症,功能与外形均获得满意效果,报告如下:

1 资料和方法

1.1 临床资料

选取 2006 年 10 月~2010 年 12 月入住我科眶 - 上颌 - 颧骨复合骨折患者 69 例,男性 45 例,女性 24 例,年龄 8~55 岁,平均年龄 31.5 岁,受伤时间均在 1 个月内,受伤原因为车祸、暴力伤及摔伤,均行三维 CT 重建,均有一侧眶 - 上颌 - 颧骨骨折,21 例合并颅脑外伤。

1.2 固定器械

采用宁波慈北医疗器械有限公司提供的口腔颌面外科专用坚固内固定钛板系列,厚度为 0.8cm 及 0.6cm 的微型钛板和

直径 1.5mm 的自攻自钻钛钉等。

1.3 手术方式

依据患者术前三维重建 CT 图像,选择冠状切口或半冠状切口 + 睑下缘切口 + 上颌前庭沟切口,并加以改良,行眶 - 颧 - 上颌骨折复位固定术,以解决咬合关系紊乱、开口受限、复视等为手术原则,如图 1-4 所示。具体手术方式如下:

全麻插管下,自一侧耳屏内沿颧部发际内切开,越过头顶部至中线或至对侧颞部发际内而达对侧耳屏内,切开头皮帽状腱膜直达骨膜,从骨膜和颞筋膜浅面向下翻瓣。在眶上缘上约 3cm 处切开骨膜,颧弓上方约 1.5cm 切开颞深筋膜浅层,在筋膜下间隙脂肪组织内走行。先暴露颧弓根部及颧额缝,然后在同一层次内沿颧骨额突后缘和颧弓上缘连接切口,直至暴露颧弓、颧骨体上 1/2 和颧骨额突,并分离、暴露颧骨面肌肉及软组织附着。必要时可去除眶上孔边缘嵴,松解并保护眶上神经血管束,即可暴露眶上缘。

睑下缘切口在睑下缘自然的皮肤皱纹内(睑缘下约 3mm),切口长度向内可接近下泪点,外可顺鱼尾纹超出外毗韧带 1.0~1.5cm。在睑板下缘平面上方切开眼轮匝肌,沿睑板表

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图 1 术前三维 C T 示右侧眶—上颌—颧骨复合骨折

Figure 1 Preoperative three-dimensional CT showed right orbital-maxillary-Zygomatic fractures

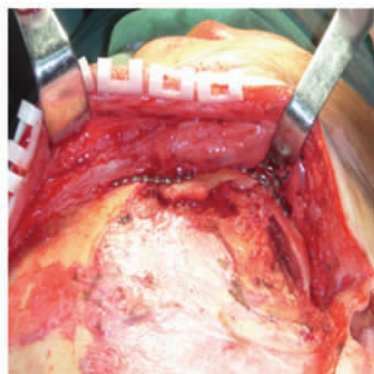


图 2 冠状切口暴露颧骨颧弓、眶外侧壁骨折部位

Figure 2 The coronal incision to expose zygomatic,orbital lateral wall fracture site



图 3 睑下缘切口暴露颧骨、眶下壁骨折部

Figure 3 The subciliary incision to expose zygoma, inferior orbital wall fracture site



图 4 口内前庭沟切口暴露上颌骨前壁骨折部

Figure 4 Oral vestibular incision to expose the department of maxillary anterior wall fracture

面向下剥离皮肤及眼轮匝肌至眶下缘水平,再沿肌纤维方向切开骨膜暴露骨面,充分暴露眶下壁、眶底及颧骨体部骨折。

口内采用上颌前庭沟切口,一般长约 3—4cm,切开粘膜后,电刀切开直达骨面,向上剥离时,注意保护眶下神经血管束,可与冠状切口贯通,切口需偏向唇颊粘膜 0.5cm 左右,充分暴露上颌骨、颧骨中下份及眶下区。

手术骨折复位重点是恢复咬合关系,重建眼眶、恢复面侧区突度、面宽、鼻筛区局部形态及面部的对称性。手术复位按照“从外到内、自上而下、从简单到复杂”顺序进行。手术中检查骨折部位和骨折段移位情况后,撬动移位骨段,使其逐步复位,然后用自攻自钻螺钉将微型钛板固定于骨折线处,固定点包括颧额缝、眶下缘、颧弓、颧牙槽嵴、梨状孔边缘。以恢复面中份水平支柱和垂直支柱,达到三维方向复位,恢复面部的外形和功能^[6,7]。

1.4 治疗效果判定标准

治疗效果判定标准分优、良、差 3 类。优:解剖复位,即恢复颧弓正常解剖弧度,恢复眶下缘、颧上颌弧度解剖形态,颧颌缝处无间隙影像,张口度恢复至 3cm,咬合关系好。良:部分达到解剖复位,观察指标中有一处复位不完善,张口度为 2~3cm。差:观察指标中两处以上未达到理想复位,张口度小于 2cm。

2 结果

2.1 手术效果

本组 69 例伤口均 I 期愈合,术后 1~3 个月均予以三维 CT 复查,68 例骨折愈合良好,内固定稳定可靠,外形恢复满意,咬合关系和张口度均恢复正常,达到理想效果,如图 5-6 所示。1 例因颧骨复合体粉碎骨折伴同侧下颌骨升支骨折,术后效果差。

2.2 并发症

2 例患者术后发生轻度睑外翻,两周后复诊,恢复正常;未出现额纹变浅、面神经损伤等其他并发症。

3 讨论

3.1 颌面部 OMZ 骨折诊断及手术时间

徐金科等^[8]对 548 例颌面创伤患者的回顾性分析认为,颅脑合并伤是颌面创伤患者死亡的首要原因。颌面部 OMZ 骨折常并发颅脑损伤,术前必须仔细检查,严格掌握手术指征,先治疗颅脑症状等,待生命体征平稳后,方可行颌面部骨折治疗。OMZ 骨折行三维 CT 扫描,可更加直观地了解三维立体空间的实际大小、形态、位置及与周围组织的解剖关系,明确诊断及准确判断骨折部位,利于制定详细周密的手术治疗计划^[9-11]。当病情稳定及肿胀基本消退后,约在 2 周内手术适宜,以免骨折错位愈合,增加手术难度。

3.2 冠状-睑下缘-口内联合切口在 OMZ 中应用的优点

①充分暴露手术野,直视下复位固定,效果确切,不易造成术后骨折段再移位;②切口隐蔽,面部疤痕不明显;③对邻近部位的骨折,如鼻骨、额骨、高位髁状突等骨折可一次性复位;④

切口与骨折手术部位非邻近关系,骨折表面骨膜及软组织覆盖好,抗感染能力强,愈合佳;⑤严重错位愈合的陈旧性骨折,可在直视下截骨及复位固定,创伤小;⑥可直接切取颅外板作为



图 5 术后十天患者正面观

Figure 5 Postoperative 10 days in patients with positive photo



图 6 术后十天患者侧面观

Figure 6 Postoperative 10 days in patients with lateral photo

修复骨缺损材料,行眶底重建等修复;⑦睑下缘入路优点为进入直接,显露广泛,血运好,睑外翻的发生率低,较好的美观效果,采用顺鱼尾纹的延长切口,不妨碍淋巴引流,避免下睑淋巴水肿,更能充分暴露眶下壁、眶底及颧骨体部骨折^[12,13]。

3.3 冠状-睑下缘-口内联合切口并发症的预防

夏德林等^[14]研究认为,并发症主要是面神经颧支的损伤、脱发和头皮疤痕、头皮下血肿与感染、麻木和感觉异常、面组织下垂、颧窝凹陷、角膜损伤等。本研究针对这些并发症进行研究,采用有效措施预防,效果满意。

3.3.1 面神经颧支的保护 熟悉颧部各筋膜的解剖和面神经颧支在筋膜中的位置是手术成功的关键。颧区有三层重要的筋膜,即颧浅筋膜、颧深筋膜浅层及颧深筋膜深层。颧浅筋膜位于颧部皮下组织的深面,上方与帽状筋膜相连续。颧深筋膜在颧上线处分为浅层和深层,浅层附着于颧弓外面,深层位于颧肌表面,附着于颧弓内面,两者之间为颧浅脂肪垫,颧深筋膜与颧肌之间为颊脂垫的上延部颧深脂肪垫所覆盖。颧浅筋膜与颧支关系密切,神经位于其深面,颧深筋膜浅层的浅面,手术中要将颧浅筋膜与头皮一并翻起,在眶上缘 3cm 切开额部骨膜,颧弓上方 1.5cm 处切开颧深筋膜浅层,在骨膜下分离暴露颧弓上缘,面神经颧支及颧支可受到筋膜和脂肪层的双重保护。通过睑下缘切口及口腔前庭沟切口与冠状切口相通,避免仅通过冠状切口过度牵拉头皮瓣暴露颧骨中、下份行固定而引发颧支损伤,采用术中内卷下翻皮瓣、间断牵拉、采用宽拉钩、适当向对侧头皮及耳垂方向延长切口,术后应用地塞米松消除神经水肿及采用维生素 B₁、维生素 B₁₂ 等神经营养药物,均能有效防治暂时性颧肌瘫痪。

3.3.2 减少面部疤痕 半冠状切口标准术式是自头顶至耳屏前不超过耳垂水平切口,但我们认为,位于耳前皱褶处的切口虽然隐蔽,但如果把耳屏前切口绕过其后,改作耳内切口,并

用 6-0 丝线在耳内缝合,可彻底消除耳前疤痕。其余切口均在发际后 3cm 处,手术刀垂直切开头皮,尽量与发根平行,避免破坏毛囊;头皮夹止血,避免电刀及钳夹止血;严密的头皮全层对位缝合均有利于减少疤痕的形成^[15]。

3.3.3 减少头皮下血肿 头皮下血肿常与术中知名动脉结扎不全有关。术中尤其注意颧浅动脉顶支的结扎,对于搏动性出血及知名静脉出血,应予以结扎,并内置负压引流管或半管引流,自耳后头皮出,予以缝合固定。术后立即予以头颅绷带加压包扎,拔管后仍需头颅绷带加压 2-3 天。

3.3.4 头皮麻木及感觉异常的预防 术后常见,顶部麻木系切断了眶上神经末梢支,颧部麻木系切断颧神经颧面支,术中尽量保留颧神经颧面支,避免眶上神经牵拉,这些症状均可在术后一定时间内恢复。

3.3.5 颧窝凹陷的预防 颧窝凹陷可能与颧颞区重度损伤或颧中动脉损伤有关。颧中动脉自颧浅动脉在颧弓水平或颧弓下方发出,越过颧弓和面神经颧支表面,分支供应颧深筋膜的脂肪,故术中应尽量保留颧中动脉,保护颧肌附着,复位悬吊缝合颧深筋膜浅层。

随着微创操作和微创外科等概念的提出,可借用内镜等通过小切口治疗面部简单骨折,但仍存在视野显示不佳等缺点。冠状-睑下缘-口内联合切口虽然存在创伤大、出血多等缺点,但具有切口隐蔽、面部疤痕不明显、显露充分、并发症少等优点,是治疗眶-上颌-颧骨复合骨折的良好手术进路。

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