

Supratarsal approach to treatment of zygomatic complex fractures

Abordagem supratarsal para tratamento de fraturas complexo zigomático

Acercamiento supratarsal en el tratamiento de las fracturas del complejo cigomático

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Abstract

Many incisions have been described for approaches to zygomatic fractures. Precise repositioning of zygomatic complex fractures is difficult. The traditional approach is through an eyebrow incision, but it can produce a scar that causes aesthetic and psychological problems for the patient. We describe the supratarsal fold approach to expose the frontozygomatic suture and to reduce small displacements of frontal sinus anterior wall; it gives good access and excellent aesthetic results.

Descriptors: Surgery, Oral; Zygoma; Surgical Procedures, Operative.

Resumo

Muitas incisões têm sido descritas para abordagens de fraturas zigomática. Reposicionamento preciso de fraturas complexas zigomáticas é difícil. A abordagem tradicional é através de uma incisão de sobrancelha, mas pode produzir uma cicatriz que causa problemas estéticos e psicológicos para o paciente. Nós descrevemos a abordagem palpebral supratarsal para expor a sutura frontozigomática e reduzir pequenos deslocamentos da parede anterior do seio frontal. O acesso mostrou-se eficiente, com excelentes resultados estéticos.

Descritores: Cirurgia Bucal; Zigoma; Procedimentos Cirúrgicos Operatórios.

Resumen

Varias incisiones se han descrito para las fracturas del complejo cigomático. El reposicionamiento preciso de fracturas del complejo cigomáticos es difícil. El enfoque tradicional es a través de una incisión ceja, pero puede producir una cicatriz causando problemas estéticos y psicológicos para el paciente. Acercamiento supratarsal fue descrito por el párpado para exponer la sutura frontozigomática y reducir los pequeños desplazamientos de la pared anterior del seno frontal. Acceso demostró ser eficaz con excelentes resultados estéticos.

Descriptores: Cirugía Bucal; Cigoma; Procedimientos Quirúrgicos Operativos.

INTRODUCTION

The zygomatic complex is responsible for anteroposterior projection of the face, then the reduction and stabilization when displaced is important for the restoration of facial symmetry, globe ocular position, infraorbital innervations, as well as facial aesthetics.^[1-3]

Camouflage the incisions on the face is essential since aesthetics is an important factor when planning a surgical approach. Many approaches have been proposed with this objective, the choice is usually made based at the fracture site, associated with the experience and surgeon training.^[4]

In respect to periorbital area, symmetry and position of the eye are essential to the restoring the facial aesthetics. To this to occur, an adequate exposure of the zygomaticofrontal suture and orbital margins is essential.^[5]

Thus, we describe a supratarsal approach to facilitate exposure to the zygomaticofrontal area, facilitating the reduction and fixation of fractures with excellent cosmetic results.

CASE REPORT

A female patient, suffered a zygomatic complex fracture on the left side, underwent surgical treatment under general anesthesia in order to achieve the reduction and fixation of fractures (Figure 1).

To access the zygomaticofrontal region, we opted for the creation of supra-tarsal approach. The supratarsal approach is performed in parallel with upper eyelid, over the tarsal plate to adequately expose zygomaticofrontal suture. When the goal is access to the anterior wall of the frontal sinus, the incision can be extended medially. The orbicularis muscle is dissected in the superior and lateral direction, exposing orbital periosteum, and the surgeon can palpate orbital rim to properly locate the fracture.

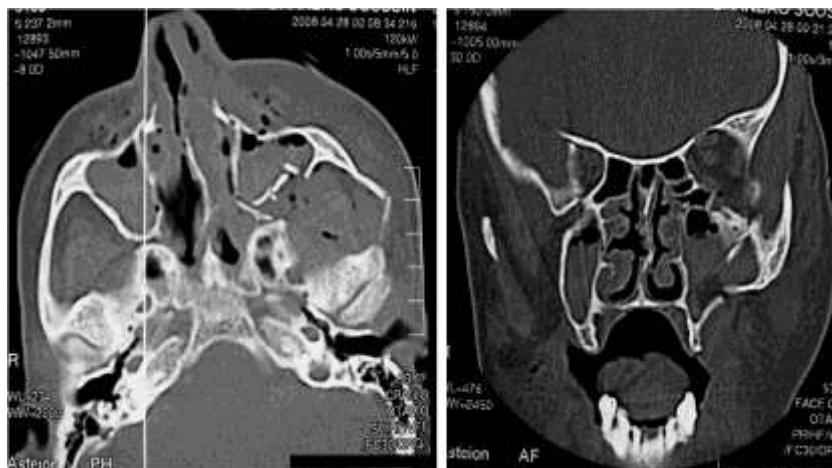


Figure 1. CT scan showing zygomatic-orbital fractures.

The zygomaticofrontal suture can be exposed by an incision in the periosteum from 2 to 3 mm along the

outer surface of the orbital margin (Figure 2). The incision is closed with interrupted sutures. A bandage compression is applied for 2 days to prevent the hematoma formation and help the repair process. In the postoperative period of 30 and 60 days the healing aspect of the surgical approach was satisfactory with no aesthetic sequelae (Figures 3 and 4).



Figure 2. Immediate postoperative.



Figure 3. Postoperative period of 30 days.



Figure 4. Postoperative period of 60 days.

DISCUSSION

Various surgical techniques have been described for the repair of a zygomatic complex fracture. Extra and intraoral incisions have been proposed and intensively used for the development of simple access that promotes sufficient exposure to reduction and fixation of fractures with better results.^[6-9]

The supratarsal incision is often used in plastic surgery for blepharoplasty. For treatment of zygomatic-orbital fractures it is known that Chuong and Kaban.^[10] were the first to describe supratarsal approach to treat zygomatic fractures. The same, described the supratarsal access as a viable alternative for exposure of the suture zygomaticofrontal with exceptional aesthetic results with inconspicuous scars^[1,5] as observed in present paper in Figures 3 and 4.

In cases of zygomatic complex fractures and fractures of the anterior wall of the frontal sinus, we can use this approach to the direct visualization zygomaticofrontal suture. The disadvantages are similar of the eyebrow approach, because these areas are similar, with almost no vital structure.

For cosmetic improvement of incision, some precautions must be taken such as the gentle use of skin hooks in tissue handling, Ophthalmic ointments or temporary tarsorrhaphy to shelter eye, delicate tissue dissection during the procedure, and the use of flexible metal spatulas for protect the contents of the orbit. Careful positioning incision is vital to camouflage the scar completely, especially when the tissue is manipulated^[9].

Complications of supratarsal access include the orbital fat exposure, lacrimal glands exposure due to the dissection of the orbital septum, but this can be avoided by careful dissection in subperiosteal plane.

CONCLUSION

The supratarsal fold incision provides excellent access to the supraorbital rim and zygomaticofrontal suture and uncomplicated design as well as its excellent cosmetic result. Complications may include exposure of orbital fat and lachrymal glands by dissection of the orbital septum, but this can be avoided by careful dissection in the subperiosteal.

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CONFLITO DE INTERESSES

Os autores declaram não haver conflitos de interesse.

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