A Rare Case of Surgical Treatment of Projectile in the Infratemporal Fossa

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Received date: Dec 03, 2015; **Accepted date:** September 20, 2016; **Published date:** September 23, 2016

Keywords: Wound ballistics; Infratemporal fossa; Rehabilitation; Temporomandibular joint

Introduction

It is difficult to calculate the actual incidence of facial injuries by firearms. In a retrospective study of about gunshot wounds, 6,9% of injuries affected the face [1]. The majority of maxillofacial gunshot wounds are caused by suicide attempts, which young men are most often affected.

The facial gunshot victim should be transported to a trauma center equipped to deal with maxillofacial and neurosurgery because 40% require emergency surgery [2].

Injuries caused by firearms

T e patient underwent general anesthesia with right sided nasotracheal intubation. Further, antisepsis with 2% chlorhexidine and apposition of the surgical area were performed, with the ear and the lateral corner of the eye visible and acoustic meatus tamponed with gauze. T e preauricular area was stained with methylene blue to asepsis and then, the area was underwent c with 2% lidocaine chlorhydrate with vasoconstrictor (1:100000). Skin and conjunctive tissue were incised toward the superf cial layer of the temporal fascia, the superf cial temporal vessels and nerve auriculotemporal retracted earlier in retail. It is incised obliquely temporal fascia in anteroposterior direction from the zygomatic arch.

T en, the deep dissection to visualize the surface of the temporomandibular ligament, capsule and palpate to the articular eminence was done, all structures were preserved. A second horizontal incision in the anterior direction occurred from the eminence against the zygomatic arch. Now, the dissection was performed with periosteum elevator toward lower, reaching the upper head of the lateral pterygoid muscle. It was continued with the same instrument, in anterior and inferior direction in order to locate the lower head of this muscle. Carefully, the region between the two heads was explored with Matzenbauer scissors, aiming to minimize the chances of achieving the maxillary artery and to locate the projectile. With the help of an anatomical clamp Halsted, the bullet was removed (Figure 3). T e closure of the layers was performed from inside to outside with Vycril 4/0 resorbable thread. T e skin was closed with continuous 6/0 Polypropilene (Prolene) and protected with a gauze overlay. T e suture was removed at intervals from the 5th to the 7th postoperative day.

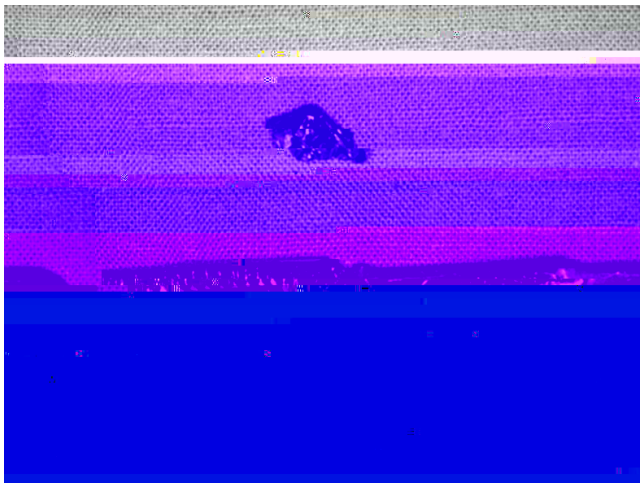

Figure 3: Projectile removed.

T e postoperative occurred without complications and the patient began physiotherapy 7 days af er leaving hospital. T e physiotherapy sessions happened twice a week for three months and the patient underwent ultrasound treatment, 1.5 w/cm^2 on the lef area for 5 minutes. It was associated with wooden spatulas, moist hot towels and passive stretching exercises for opening, closing and lateral jaw movement. A new radiographic exam show the projectile is no longer there (Figure 4 A and B). T e patient presented neither sensorial autonomic or motor impairment. T e follow up revealed that the patient presented mouth opening of 40.02 mm and no pain.

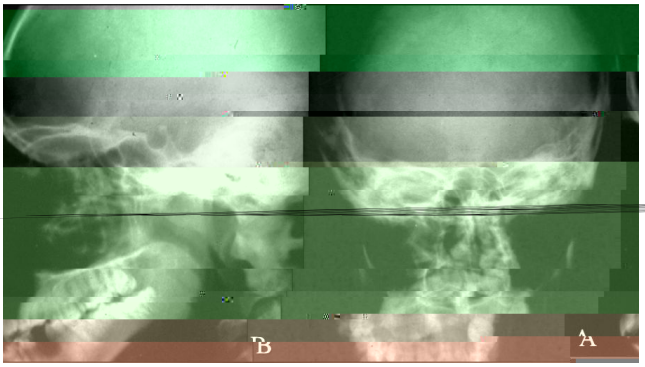

Figure 4: Lateral (A) and forward (B) radiographs post-surgical. Note the absence of the projectile.

computed tomography would be ideal to evaluate the foreign object place and such muscle. Another problem in the surgical was malfunctioning image intensifer hindering the location of the projectile.

Throughout the arthrotomy, regardless of access that takes place - endaural, preauricular, post-auricular - there is a possibility of damaging the facial nerve, mainly temporal branch and less often the zygomatic branch and auriculotemporal nerve [5,6]. In this case reported, there was no motor, sensory or autonomic damage noted during the follow-up.

The use of endoscopy has increased in recent years because it allows surgeons to get access to

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