An Extremely Long Lasting Foreign Body in the Orbital Floor

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Abstract

Maxillofacial traumas and resultant orbital foreign bodies are problematic. These types of injuries can be overlooked easily, and they can cause severe complications. In this clinical report, a patient with an intraorbital foreign body (glass) secondary to a maxillofacial trauma that occurred 20 years ago is presented.

Keywords: Orbita, foreign body, maxillofacial, glass

INTRODUCTION

Foreign bodies in the maxillofacial region or in the orbit are often the result of traumatic incidents and are often seen in adults. The types of foreign bodies most frequently encountered in the orbital region are metallic objects and chunks of glass.1 Intraorbital foreign bodies are usually the result of high-energy injuries but can also be identified after minor injuries with no significant history.2 Because an untreated foreign body can give rise to severe complications, all patients who present with maxillofacial trauma should be examined with care and skepticism.

The presented case describes a patient who was treated for an intraorbital foreign body secondary to maxillofacial trauma. Presentation of this case, in which the patient had a history of a 20-year-old maxillofacial trauma, intends to draw the reader’s attention to the fact that foreign bodies occurring subsequent to a maxillofacial trauma can easily go unnoticed and in turn lead to functional losses.

CASE PRESENTATION

The 29-year-old patient presented to our outpatient clinic with complaints of diplopia, limited movement of the left eye, stiffness palpable inferolateral to the left eye, and a recently emerged redness on the left lower eyelid. The patient’s history revealed that laceration had occurred, extending from the nasal dorsum to the intraorbital region, after he had fallen onto a glass surface approximately two decades ago. A stiff, immobile mass inferolateral to the left orbit, irregularity on the lower orbital rim, and limited upward movement of the left eye were identified during the physical examination. A computed tomography (CT) was planned and results showed a sizable foreign body extending along the orbital base inferolateral to the left orbit (Figure 1). After ophthalmologic consultations, the patient was operated on under general anesthesia. Informed consent was obtained from the patient as required for the procedure. In the exploration performed through a left subciliary incision, irregularity and a healed fracture line was identified in the left orbital base. A foreign body (glass chunk) of approximately 1.5 × 2 cm was extracted from the orbital base (Figures 2, 3). The patient had a smooth recovery, and no problems were encountered in the postoperative period.

DISCUSSION

Orbital injuries caused by foreign bodies are problematic. Because trauma history can easily be overlooked, both diagnosis and treatment can be challenging. Although cases that have been diagnosed after up to 1.5 years of injury are reported in the literature6, to the best of
our knowledge, no case has been reported where a foreign body has remained in the orbit for as long as almost two decades, as observed in the present case. Careful anamnesis, detailed physical examination, and a high level of skepticism combined with the appropriate imaging techniques is vital for accurately diagnosing foreign bodies in the orbit.

Unextracted orbital foreign bodies can lead to severe functional and structural disorders. Orbital fractures and meningitis concomitant with loss of vision and possible brain damage inflicted by intraorbital foreign bodies have been reported in the literature. Unextracted orbital foreign bodies can lead to severe functional and structural disorders. Orbital fractures and meningitis concomitant with loss of vision and possible brain damage inflicted by intraorbital foreign bodies have been reported in the literature. The most frequent complications triggered by orbital foreign bodies include proptosis, chronic fistula, orbital abscess, cellulitis, and eye muscle or optic nerve wounds.

Diagnosis of orbital foreign bodies is often difficult and depends on the content and size of the foreign body. Metallic objects and glass chunks are the most frequently encountered orbital foreign bodies and rarely cause inflammatory reactions, unless they contain copper. On the contrary, although less often identified, organic foreign bodies usually create an inflammatory response, and unless extracted from the body, can become chronic with severe sequelae.

Direct radiography, ultrasound imaging, CT, and magnetic resonance imaging (MRI) can be used for diagnosing orbital foreign bodies. Conventional radiography should be definitely requested for all maxillofacial traumas after the initial physical examination. Sometimes, however, a radiograph may not be effective enough for identifying foreign bodies. Axial and coronal CT can provide detailed information about a maxillofacial trauma and can be useful in the localization of a foreign body. On the other hand, despite being effective against high-density materials such as glass or metal, CT is less sensitive to foreign bodies of low-density such as organic items. MRI can also be used in these types of injuries, however, should not be used in cases that are likely to contain metallic foreign bodies because metallic objects can inflict irreversible orbital injuries in magnetic fields. Despite displaying negative imaging results, exploration can be beneficial if a history supporting the presence of an orbital foreign body is applicable.

The size, localization, and content of the material are important in the decision regarding the exploration and extraction of the foreign body. Foreign bodies can be easily removed from the subcutaneous plane, the nasal passage, and the maxillary or the frontal sinuses, but cases where the body is localized in posterior regions such as the sphenoidal sinuses or the posterior orbital region are not good candidates for surgical extraction. Foreign bodies localized in posterior regions present an increased risk of optic neuropathy and other similar complications following a surgical procedure.

**CONCLUSION**

Maxillofacial injuries should be evaluated in terms of a possible foreign body penetration. Many cases and radiology studies addressing orbital foreign bodies are presented in the literature. All of these reports emphasize the potential detrimental effects of foreign bodies. Another important aspect stressed
in these reports is the latency time, which may be hours to months. However, no other case is reported in the literature to involve a foreign body that has gone unnoticed for such a long time as was in our case. Therefore, we believe that the presentation of the present case is valuable in that it emphasizes the importance of identifying intraorbital foreign bodies and preventing long-term sequelae in maxillofacial injuries.

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REFERENCES