

Ballistic Projectile in the Retropharyngeal Region with Oropharyngeal Bulging a Case Report

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Abstract

Case Report

A retained ballistic projectile in the retropharyngeal region may present as oropharyngeal bulging after a cervicofacial gunshot wound. We report the case of a 25-year-old serviceman who sustained a gunshot injury to the left chin region during an attack on his operational base. Clinical examination showed a healed punctiform entry wound, bulging of the posterior oropharyngeal wall, and uvular deviation. Cerebral and cervicofacial computed tomography performed 24 hours after the injury identified a metallic projectile near the skull base, approximately 14 mm from the upper part of the clivus. Initial treatment comprised broad-spectrum antibiotics, analgesia, and resuscitative measures. Two weeks after the injury, the projectile was removed through a direct transoral approach under general anesthesia. Recovery was uneventful, with no hemorrhagic or infectious complications and no functional sequelae at one-year follow-up. Although spontaneous migration was reported in the source case description, serial imaging demonstrating displacement was not provided. This case documents successful transoral extraction of an accessible projectile; the timing and anatomical course of the reported migration require confirmation.

Keywords: Ballistic projectile, Military personnel, Oropharynx, Spontaneous migration, Gunshot wound.

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INTRODUCTION

Ballistic injuries to the face and neck are encountered in military and civilian settings and may involve complex patterns of tissue damage [1,2]. Secondary movement of retained projectiles has been described, including intracranial migration [3]. Structural imaging contributes to the evaluation of traumatic injury [4]. A projectile adjacent to the posterior pharyngeal wall raises questions about its anatomical location, accessibility, and relationship to surrounding structures. We describe the clinical findings, computed tomography (CT) localization, transoral removal, and one-year outcome in a young serviceman with a projectile in the retropharyngeal region. Spontaneous migration is the interpretation reported by the treating team; the available case narrative does not include serial imaging proving displacement.

CASE REPORT

Methods

This report concerns one patient assessed by an otorhinolaryngology team following a cervicofacial gunshot injury. Assessment included clinical examination of the entry wound and the oral cavity and oropharynx, followed by cerebral and cervicofacial CT performed 24 hours after the trauma. The source description reports three-dimensional CT reconstructions.

Initial treatment consisted of broad-spectrum antibiotic therapy, analgesics, and resuscitative measures. Surgical removal was scheduled two weeks after the initial injury. General anesthesia was administered with orotracheal intubation. A Boyle–Davis mouth gag was used for exposure, and the projectile was removed through a direct transoral approach. Clinical follow-up continued at regular,

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closely spaced intervals for one year. The antibiotic regimen, operative dissection details, and exact follow-up intervals were not specified in the source manuscript.

RESULTS

The patient was a 25-year-old serviceman with no relevant medical history who attended the

otorhinolaryngology clinic after an attack on his operational base. Examination showed a healed punctiform entry wound in the left chin region, below the body of the left mandible, at the junction of its anterior third and posterior two-thirds. Intraoral examination revealed prominent bulging of the posterior oropharyngeal wall with uvular deviation (Figure 1).



Figure 1: Intraoral view showing the posterior oropharyngeal wall. The source clinical description reports posterior wall bulging and uvular deviation. The photograph has been cropped to the oral region

CT demonstrated a metallic opacity corresponding to the projectile near the middle portion of the skull base, described as lying in a lower projection approximately 14 mm from the upper part of the clivus

(Figures 2 and 3). The precise anatomical compartment and measurement reference require confirmation from the radiological report.

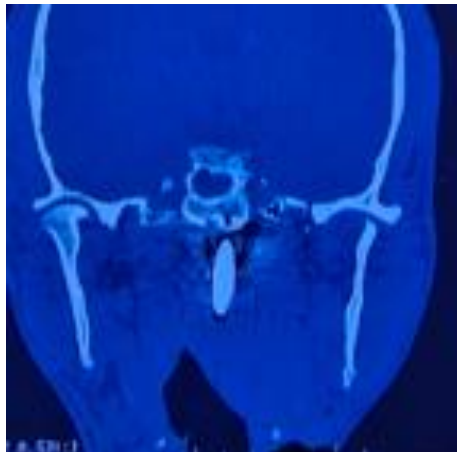


Figure 2: Coronal CT view showing the metallic projectile near the skull base. Peripheral identifying annotations have been excluded by cropping.

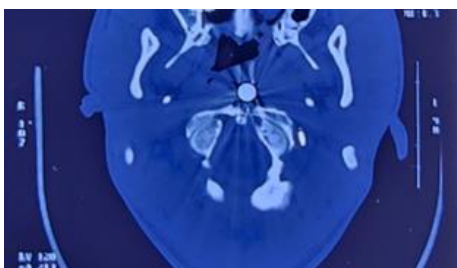


Figure 3: Axial CT view showing the metallic projectile posterior to the oropharyngeal airway. Peripheral identifying annotations have been excluded by cropping

Transoral exposure and extraction were successful (Figures 4 and 5). Postoperative recovery was uneventful, without hemorrhagic or infectious

complications. Regular clinical follow-up to one year showed complete recovery without functional sequelae.

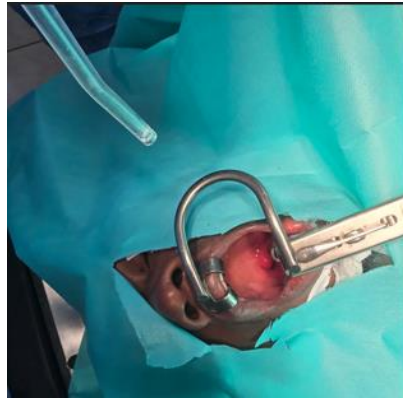


Figure 4: Intraoperative transoral exposure using a Boyle–Davis mouth gag



Figure 5: Extracted ballistic projectile. No scale was provided in the source image

Table 1: Clinical timeline

Time relative to injury	Findings or management
At injury	Gunshot wound to the left chin region during an attack on the operational base.
Clinical examination, exact timing not specified	Healed entry wound; posterior oropharyngeal wall bulging and uvular deviation.
24 hours	Cerebral and cervicofacial CT localized the metallic projectile near the skull base.
Initial management, exact timing not specified	Broad-spectrum antibiotics, analgesics, and resuscitative measures.
Two weeks	Transoral extraction under general anesthesia with orotracheal intubation.
Postoperative period to one year	Uneventful recovery; no hemorrhagic or infectious complications; no functional sequelae.

DISCUSSION

This case illustrates successful removal of a projectile through a transoral approach after a cervicofacial gunshot wound. The patient's age and military setting are consistent with the populations considered in published studies of ballistic facial and neck trauma [1,2]. Military maxillofacial care also has implications for surgical training and readiness [5]. These contextual observations do not establish the frequency of this particular presentation.

Migration must be distinguished from the initial ballistic trajectory. Kessely *et al.*, described a projectile that changed intracranial location after injury [3]. In the present report, the entry wound was submandibular and the projectile was identified near the skull base; however, only one CT examination is described. These

observations alone cannot establish secondary displacement, its direction, or its mechanism. Serial studies or dated clinical findings documenting a change in position would be needed to substantiate the proposed migration. No intracranial passage can be inferred from the information provided.

CT was used to locate the projectile before removal. The role of structural imaging in trauma is discussed by Lee and Newberg [4], although their review concerns traumatic brain imaging rather than a specific protocol for retropharyngeal bullets. In this patient, the reported distance of 14 mm is retained without reinterpretation. The available description does not establish whether contrast-enhanced imaging or angiography was performed, or exclude vascular involvement.

The medical and surgical treatment reported here was followed by a favorable outcome. Delayed deep cervical infection has been described after another type of penetrating neck injury, an arrow wound [6]; this provides contextual evidence about retained foreign bodies and cannot define an antibiotic regimen for this ballistic case. Al-Sebeih *et al.*, described migration of ingested upper aerodigestive foreign bodies and the diagnostic contribution of CT [7]. Their patients underwent external extraction, so that study does not establish transoral removal as the preferred approach for a ballistic projectile.

The transoral route provided successful access in this individual patient. A single favorable case cannot establish comparative superiority or guarantee safety in other anatomical locations. The report is limited by the absence of serial imaging, detailed vascular assessment, specified antimicrobial treatment, and a precise operative description. The patient's own perspective was not provided.

CONCLUSION

In this patient, a projectile adjacent to the oropharynx was localized by CT and successfully removed through a transoral approach, with no reported complications or functional sequelae at one year. The available narrative supports this treatment outcome. The proposed spontaneous migration remains to be substantiated by chronological clinical or imaging evidence.

Declarations

Consent for publication: The source manuscript states that written informed consent was obtained from the patient for publication of the case and associated images. The corresponding author should retain the signed consent and confirm that it covers the final figures.

Conflicts of interest: The authors declare no conflicts of interest related to this report, as stated in the source manuscript.

Originality and author approval: The source manuscript states that the work is original, has not been

published, is not under consideration elsewhere, and was approved by all seven authors. All authors must approve this translated and revised version before submission.

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