

# A Decade-old Foreign Body Neck: An Unusual Case

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## ABSTRACT

**Aim:** To share our experience in diagnosing and managing an asymptomatic, long-standing impacted foreign body in the neck.

**Background:** Head and neck is not an uncommon site for penetrating foreign body impaction. Nonspecific minor injuries may undergo unrecognized but vascular injuries due to sharp foreign bodies may have devastating outcomes. Most of these foreign bodies are recognized and retrieved in the early post-trauma period. Our patient had a long-standing foreign body which was incidentally discovered on a radiological scan.

**Case description:** A 28-year-old patient was incidentally discovered to have a long-standing, asymptomatic, impacted metallic foreign body in the neck while he was undergoing magnetic resonance imaging (MRI) of the hip. The foreign body was surgically removed.

**Conclusion:** Impacted metallic foreign bodies may lie asymptomatic for long durations of time without causing any morbidity to the patient.

**Clinical significance:** The decision for removing the asymptomatic impacted foreign body can be taken on a case-to-case basis.

We present a foreign body neck case to demonstrate how it can interfere with the radiological diagnosis of other diseases and needs to be retrieved.

**Keywords:** Foreign body, Head and neck, Parotid gland.

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## INTRODUCTION

Penetrating neck injuries constitute 5–10% of all trauma cases.<sup>1</sup> Penetrating trauma to the neck can be divided and evaluated by dividing it into three zones:

Zone I—ranges from clavicle to cricoid cartilage, the highest rate of mortality occurs in this area due to vascular injuries.<sup>2</sup>

Zone II—ranges from zone I to mandible, it is the most common site of injury.<sup>3</sup>

Zone III—ranges from the angle of the mandible to the base of the tongue.

A computed tomographic (CT) scan is the investigation of choice for a stable penetrating neck injury. It helps detect the anatomical location and nature of the foreign body. Also, it can provide crucial information about the integrity of the neurovascular structures and the aerodigestive tract.<sup>4</sup>

Early detection and removal of a foreign body are needed as delayed foreign body in neck may lead to fibrosis, infection, damage to vital structures, and delayed rupture of a vessel.<sup>5</sup>

## CASE DESCRIPTION

A 28-year-old male patient was diagnosed with Koch's hip in Gorakhpur by Tuberculosis Platinum test in July 2020. The patient was started on antitubercular treatment but there was no improvement. The patient developed pus discharging sinus over medial aspect of upper thigh on 21st June, for which the physician advised MRI of the hip. The radiologist could not carry out an MRI of the hip as the patient developed excruciating pain on the left side of the neck. He recalled that he was hit by a metallic object 12 years back from a construction site. The patient presented to Ear, Nose, Throat Outpatient Department to get it removed. On clinical examination of the patient, a firm, nontender, 1 × 2 cm swelling with smooth margins was palpable on the left side of the neck just below the angle of the mandible. The radiologist did a CT scan of the neck to confirm the exact location of the foreign body. It revealed a hyper-dense shadow located at the level of the left parotid gland, most likely a metallic foreign body,

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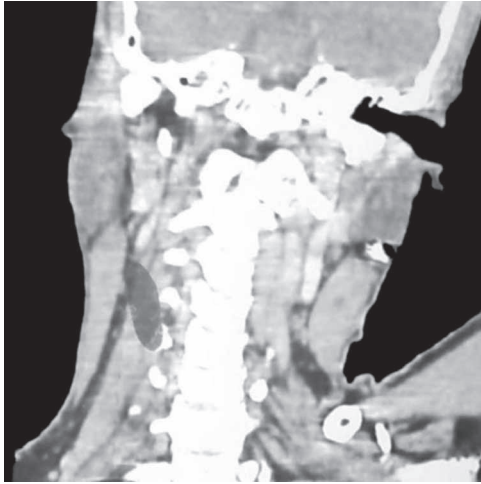
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and the rest of the structural anatomy of the neck was within normal limits (Fig. 1). The patient was planned for excision under general anesthesia and took fitness for the same. Under general anesthesia, the foreign body was palpated and an approximately 4 cm long horizontal incision was given over it (Fig. 2). The wound site was explored and after dissecting the superficial soft tissue, the black-colored metallic foreign body was traced (Fig. 3). Further dissection all around the metallic body allowed an in toto retrieval of the foreign body (Fig. 4). Following a drain insertion at the wound site, the surgeon completed closure. Postoperative antibiotic and analgesic were given. The patient's postoperative recovery was uneventful.

## DISCUSSION

Residual foreign body in the neck may remain unnoticed for years, at times, even lifelong. However, at times it may result in a situation of crisis. Penetrating neck injuries carry a 9% mortality rate.<sup>6</sup> It may lead to vascular trauma in 25% and/or tracheobronchial injuries in less than 10% to as high as 20%<sup>7</sup> of the patients, both of which may be potentially fatal. Impacted foreign bodies are usually secondary to gunshots and stab wounds,<sup>8</sup> no such event was encountered by our patient.



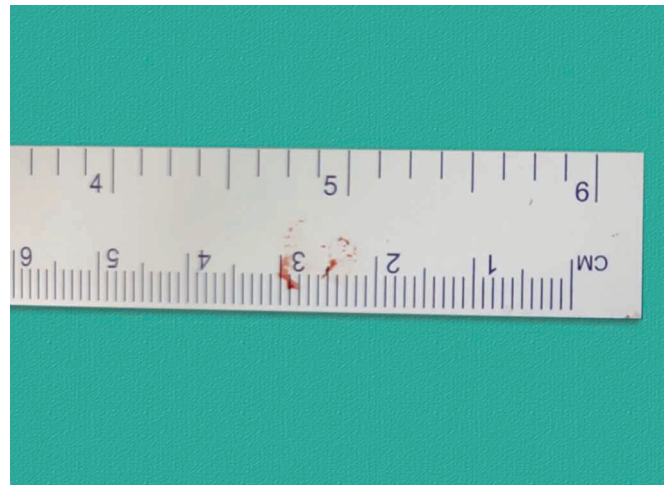
**Fig. 1:** Computed tomographic scan of patient showing metallic foreign body on the left side of the neck



**Fig. 3:** Showing metallic foreign body being removed intraoperatively



**Fig. 2:** Showing incision of patient



**Fig. 4:** Metallic foreign body extracted

The cause of foreign body in our patient was a metallic projectile from a construction site that accidentally hit his neck. Since it did not cause any vascular or aerodigestive tract injury, it did not cause any significant morbidity to the patient and remained impacted in the neck without the patient seeking any definitive management for the same.

Life-threatening complications such as delayed rupture of common carotid artery and internal jugular vein<sup>9</sup> have been reported in the past. However, no such complication was seen in our patient.

A few studies advocate mandatory exploration of all foreign bodies as they are known to migrate and cause secondary complications.<sup>10,11</sup> Some studies advocate exploration in selected cases only.<sup>12</sup> A study by Asensio et al.<sup>13</sup> reviewed the subject of mandatory exploration vs selective exploration but found no approach superior to one another. In our patient, however, the foreign body was lying neglected without any symptoms to the patient. It was recognized only when the patient was taken up for an MRI of the hip. It was removed so that the MRI could eventually be performed.

A CT scan is considered the investigation of choice in such patients.<sup>4</sup> We also performed this imaging investigation before

taking up the patient for surgical removal of foreign body. However, in patients with a suspected vascular injury secondary to foreign body, using a contrast-enhanced CT angiography has been advocated as a noninvasive tool over conventional angiography.<sup>14</sup> In our case, there was no sign of any vascular injury; therefore, we did not order an angiography.

## CLINICAL SIGNIFICANCE

To conclude, an impacted foreign body may remain within the neck without causing any symptoms to the patient. The decision for removing the asymptomatic impacted foreign body can be taken on a case-to-case basis.

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