



# Foreign Body in Sacral Region: Remaining Part of Knife After Stabbing

## Sakrumda Yabancı Cisim: Bıçaklanma Sonrası Geride Kalan Bıçak Parçası

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### ABSTRACT

Residual foreign bodies may be seen after penetrating injuries, accidents, or medical procedures. The head and neck are the most common sites of residual foreign bodies. Computed tomography is the best diagnostic modality for determining their shape, exact location, and relationship to adjacent tissues. Treatment consists of removing the foreign body if possible. We present a case of residual foreign body at the sacrum after stabbing.

**Keywords:** Foreign body, sacrum, stabbing

### ÖZ

Penetran yaralanma, kaza sonucu veya tıbbi işlem sonrası geride yabancı cisim kaldığı görülebilmektedir. Baş ve boyun bölgesi geride yabancı cismin kaldığı en sık bölgedir. Bilgisayarlı tomografi yabancı cismin şeklini, gerçek yerleşim yerini ve çevre dokular ile ilişkisini göstermedeki en uygun tanı yöntemidir. Tedavi; çıkarılması uygun olanların cerrahi çıkarılmasıdır. Burada bıçaklanma sonrası sakrumda geride yabancı cisim kalan olguyu sunmaktayız.

**Anahtar Kelimeler:** Yabancı cisim, sakrum, bıçaklanma

## Introduction

Remaining foreign bodies such as bullet, shrapnel, needle, wood, metallic pieces and medical materials (sponge, surgical or diagnosing instruments etc.) could be seen after stabbing, firearm or blastic injuries, accidental or suicidal attempt or medical procedures. These remaining foreign bodies are presented at head, neck, torax, abdomen, buttock and extremities or multiple locations. Remaining foreign body after stabbing especially at sacrum is a very rare condition. Foreign body can be seen at plain radiography but computed tomography (CT) is the most suitable diagnostic modality. Remaining foreign body can be removed if it is applicable. Here we present a case of remaining foreign body at sacrum after stabbing.

## Case Report

Twenty-one years old man with history of stabbing from sacral region six month before and remaining part of knife was applied to general surgery service with lumbosacral pain. There is an incision scar at gluteal region and pain in palpation at physical examination. Bright, smooth edged foreign body seen at lumbosacral plain graphy (Figure 1). Smooth edged, sharp, metallic foreign body image that terminal of it stuck in S2 vertebral spinous process but not damage spinal cord was seen at CT (Figure 2). After necessary operative preparation under local anesthesia and sedation with consultation of neurosurgery foreign body was removed (Figure 3). No complication was seen after operation and control evaluations



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in postoperative neurological and surgical follow up at the two years were normal.

## Discussion

Penetrating injuries of buttock are important injuries and 2-3% of the penetrating injuries. These injuries are life-threatening conditions, and about one quarter of these injuries may occur neural, visceral and vascular injuries. It has been reported that total mortality rate of penetrating

injuries of buttock 2.9%, stabbing injury mortality rate 3.8% and gunshot injury mortality rate 2.6% in literature.<sup>1,2</sup> In our case, there is no neurologic, vascular or visceral injuries but only stuck in S2 vertebral spinous.

Remaining foreign bodies after penetrating injuries occur by firearm, blastic and stab injuries or accidents. Head and neck such as ear, eye, nose and pharynx are the most common site of remaining foreign body after penetrating injuries. Gunshot pellets could remain at torax, abdomen and extremities.<sup>3,4,5</sup> Remaining foreign body after stabbing is a very rare condition. Our case has an sacral operation history after stabbing but a part of knife remained at sacrum. Diagnosing the remaining foreign body can change according to foreign body feature. Although metallic foreign bodies can be seen at plain radiographies but it is very difficult to determine the exact location and the relationship of foreign body with vascular, visceral and neural structures. CT is the most appropriate diagnostic method because of determination the exact location and the relationship of foreign body with vascular, visceral and neural structures.<sup>6,7</sup> In our case, at plain graphy a bright smooth edged foreign body was seen but exact location and relationship of foreign body with vascular, visceral and neural structures could be evaluated by CT.

The mainstay of treatment is removing the foreign body as possible to remove without further complications. Vascular, visceral and neurologic statements must be evaluated carefully and consulted with cardiovascular surgeon or neurosurgeon pre or peroperatively.<sup>8,9</sup> In our case, according to CT image we consulted with neurosurgeon

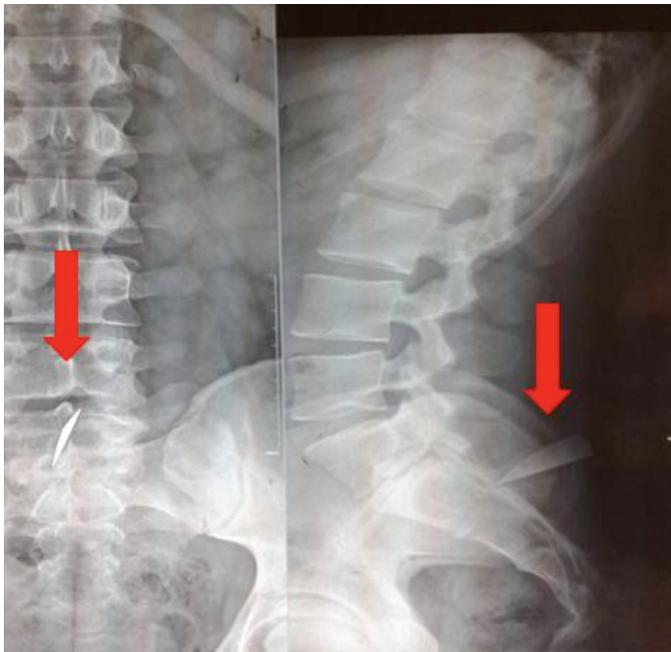


Figure 1. Image of lumbosacral plain graphy

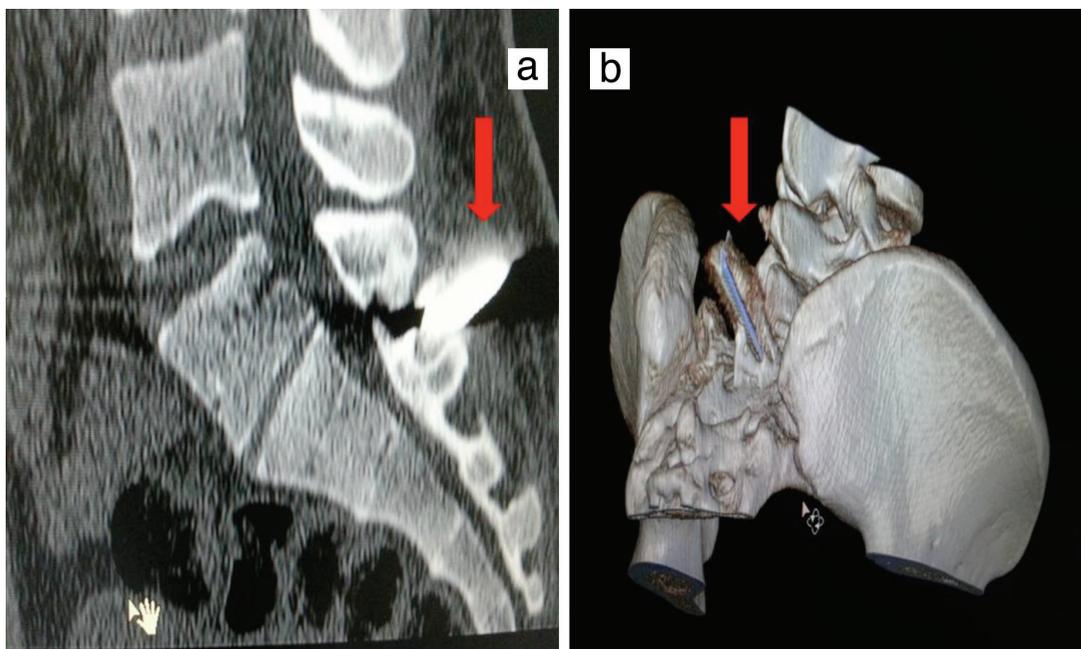
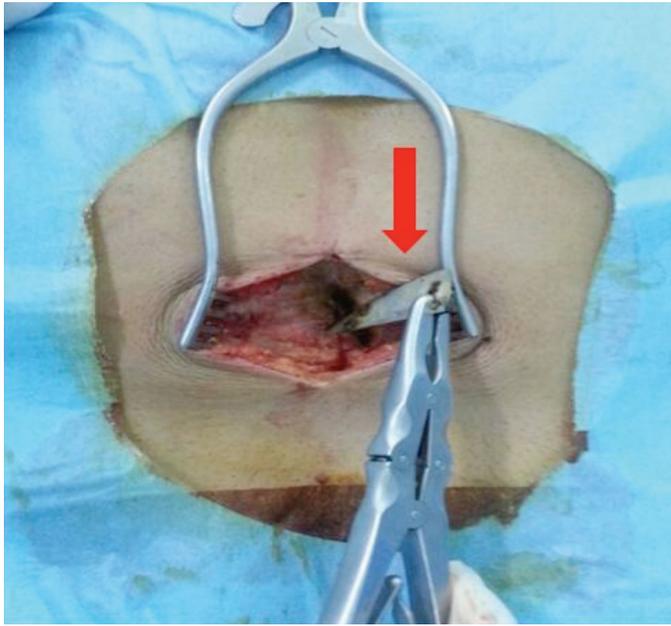


Figure 2. Image of computed tomography a) Horizontal section image, b) 3D image reconstruction of sacrum



**Figure 3.** Image of peroperative exploration

pre and peroperatively. There is an ossesos pathology on S2 vertebra and spinal cord was intact.

As a conclusion; penetrating injuries of sacrum is important and sometimes life-threatening injuries. CT is appropriate diagnosing modality for injuries or remaining foreign bodies due to increased risk of vascular, visceral and neural injuries. Preoperative and peroperative necessary consultation will reduce the morbidity and mortality rates.

### Ethics

**Informed Consent:** Consent form was filled out by participant.

**Peer-review:** Externally peer-reviewed.

### Authorship Contributions

Surgical and Medical Practices: D.Ö.K., B.H., A.K.S., Concept: İ.Y., Ö.D., Design: D.Ö.K., B.H., Data Collection or Processing: D.Ö.K., B.H., A.K.S., Analysis or Interpretation: D.Ö.K., B.H., A.K.S., Literature Search: İ.Y., Ö.D., İ.S., Writing: D.Ö.K.

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### References

1. Lunevicius R, Schulte KM. Analytical review of 664 cases of penetrating buttock trauma. *World J Emerg Surg* 2011;6:33.
2. Hefny AF, Salim EA, Bashir MO, Abu-Zidan FM. An unusual stab wound to the buttock. *J Emerg Trauma Shock* 2013;6:298-300.
3. Bosman WM, Ritchie ED, da Costa SA. Cutaneous fistula due to remaining foreign bodies after penetrating neck injury. *BMJ Case Rep* 2013:2013.
4. John SS, Rehman TA, John D, Raju RS. Missed diagnosis of a wooden intra-orbital foreign body. *Indian J Ophthalmol* 2008;56:322-324.
5. Kühnel TV, Tudor C, Neukam FW, Nkenke E, Stockmann P. Air gun pellet remaining in the maxillary sinus for 50 years: a relevant risk factor for the patient? *Int J Oral Maxillofac Surg* 2010;39:407-411.
6. Pham TN, Heinberg E, Cuschieri J, Bulger EM, O'Keefe GE, Gross JA, Jurkovich GJ. The evolution of the diagnostic work-up for stab wounds to the back and flank. *Injury* 2009;40:48-53.
7. Albrecht RM, Vigil A, Schermer CR, Demarest GB 3rd, Davis VH, Fry DE. Stab wounds to the back/flank in hemodynamically stable patients: evaluation using triple-contrast computed tomography. *Am Surg* 1999;65:683-687.
8. Stern LC, Moore TA. Nail gun injury to the sacrum: case report and review of the literature. *Spine (Phila Pa 1976)* 2011;36:1778-1780.
9. Gul S, Dusak A, Songur M, Kalayci M, Acikgoz B. Penetrating spinal injury with a wooden fragment: a case report and review of the literature. *Spine (Phila Pa 1976)* 2010;35:1534-1536.