



Case Report

Penetrating Injury of Right Hand Due To Impalement of a Wooden Foreign Body in a Professional Wood Cutter: A Case Report

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ABSTRACT

Introduction: Penetrating injuries of hand and fingers are widely reported in literature, but the penetrating injuries in professional wood cutters are rarely reported. A foreign body stuck into an extremity may lead to complications like soft tissue and neurovascular injuries, infection and delayed wound healing. Delayed and inadequate treatment of these injuries can lead to devastating complications like loss of function and permanent contractures of extremities.

Case report: A 35 years old professional wood cutter presented to the emergency department of Bone and Joint Hospital Srinagar with 4 hours old penetrating injury of right index finger with sharp wooden foreign body. Under Local anaesthesia using 2% lidocaine, the wooden foreign body stuck on the dorsal aspect of right index finger was shortened by cutting the protruding part. The remaining part of the wooden foreign body was removed by extending the wound both proximally and distally, thorough wound washing was done, after that thorough wound debridement was done by removing all the devitalized tissues.

Discussion: Foreign body penetration of hand and fingers usually present as emergency cases Prompt recognition and treatment of penetrating injuries and impalement of foreign bodies are important for successful recovery. Removing the FB blindly just by extraction is indisputably an error. With respect to findings of Emre Hocaoglu et al 36% of the cases had an injury of either a neurovascular or a tendinous structure or combinations thereof. In general, it is crucial to extend the wound with incisions that will allow exploration of the FB or the penetrated part of it and the structures in close proximity. The standard principles of wound management should be applied while managing these injuries.

Conclusion: Penetrating injuries due to impalement of foreign bodies in professional wood cutters should be recognized early and managed vigorously, so that the complications both mechanical and infective can be prevented.

Key words: Impalement of wooden foreign body, wood cutter.

INTRODUCTION

Penetrating injuries of hand and fingers are widely reported in literature, but the penetrating injuries in professional wood

cutters are rarely reported. Foreign body penetration of hand and wrist usually present as emergency cases. ^[1] A foreign body stuck into an extremity may lead to complications

like soft tissue and neurovascular injuries, infection and delayed wound healing. Delayed and inadequate treatment of these injuries can lead to devastating complications like loss of function and permanent contractures of extremities. [1-3] Vigorous treatment in the form of tetanus toxoid and antibiotic prophylaxis, removal of the penetrating foreign body, thorough wound debridement and wound washing can prevent these complications and allows early return to work. [1,3]

CASE REPORT

A 35 years old professional wood cutter presented to the emergency department of Bone and Joint Hospital Srinagar, with 4 hours old penetrating injury of right index finger with sharp wooden foreign body. On examination a wooden piece was stuck on the dorsal aspect of right index finger just above the MCP joint, bleeding from the wound was mild, there was swelling of right index finger and right hand. Sensations and capillary refill distal to wound were normal. Radiographic examination revealed no bony injury. Tetanus toxoid and 1 gram of intravenous cefazolin was given to patient. Entire right hand and foreign object was painted with betadine. Under Local anaesthesia using 2% lidocaine the wooden foreign body stuck on the dorsal aspect of right index finger was shortened by cutting the protruding part. The remaining part of the wooden foreign body was removed by extending the wound both proximally and distally, thorough wound washing was done after that thorough wound debridement was done by removing all the devitalized tissues. After the extraction of the foreign body the distal neurovascular examination was normal. Wound was not closed and antiseptic dressing was applied. Postoperatively no complication was seen, the patient returned to work after 1 week.



Figure 1: Wooden Piece stuck on the dorsum of right index finger in a professional wood cutter.

DISCUSSION

Foreign body penetration of hand and fingers usually present as emergency cases but elective applications of patients with embedded objects are not uncommon. [1,2] Penetrating injuries of hand with impalement of wooden foreign bodies in professional wood cutters although common but rarely reported. Prompt recognition and treatment of penetrating injuries and impalement of foreign bodies are important for successful recovery. [3] The initial examination should include observation for bleeding, deformity of bone or joint and distal neurovascular status. [3,4] Anderson et al [2] found that 40% of retained foreign bodies were not detected upon initial examination by a physician. Bonatz et al [5] found that ultrasonography had 95% sensitivity and 89% specificity in patients with negative radiographs who were suspected to have foreign bodies in the hand. In above case ultrasonography was not performed because large part of the foreign body was visible outside the wound and we were able to remove the wooden foreign body as a single piece. In case of penetrations with remarkable-sized objects, estimation of the location and the course of

the FB in the tissue are usually easier, but removal of the object without damaging the surrounding tissues is obviously the most challenging part of the management. Even if there are no symptoms or findings of a structural injury, removing the FB blindly just by extraction is indisputably an error. [1,2,4] With respect to findings of Emre Hocaoglu et al [1] 36% of the cases had an injury of either a neurovascular or a tendinous structure, or combinations thereof. In general, it is crucial to extend the wound with incisions that will allow exploration of the FB, or the penetrated part of it, and the structures in close proximity. The standard principles of wound management should be applied while managing these injuries. [6]

CONCLUSION

Penetrating injuries due to impalement of foreign bodies in professional wood cutters should be recognized early and managed vigorously, so that the complications both mechanical and infective can be prevented.

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Abbreviations:

MCP- Metacarpophalangeal joint

FB- Foreign body.

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