

A Case of a Penetrating Wound in the Abdominal Wall Induced By a Javelin Due To an Unusual Mechanism

Youichi Yanagawa* MD, PhD

Department of Acute Critical Care Medicine, Shizuoka Hospital, Juntendo University, Japan

***Corresponding author**

Youichi Yanagawa

Article History

Received: 15.08.2018

Accepted: 27.08.2018

Published:30.08.2018

DOI:

10.36347/sjmcr.2018.v06i08.027



Abstract: This report aims to increase the awareness of an unusual mechanism of abdominal wall injury sustained by a javelin. A nineteen-old female was practicing to throw a Javelin forcefully by leaning forward. The Javelin erroneously struck the ground and the opposite side (tail) of a relatively sharp edge of the Javelin penetrated her right abdominal wall she lost her balance. The penetrating wound was to the fascia of the lateral abdominal muscle, fortunately the injury did not induce any visceral injuries. The wounds were opened and irrigated under local anesthesia, and then primarily closed. The wounds recovered without complications. An abdominal wall injury from a javelin is rare. However, a change in the design of the opposite side of the javelin might help prevent further injuries of this type.

Keywords: abdominal wall injury, visceral injuries, visceral injuries.

INTRODUCTION

Recently, spear wounds in the advanced counties are extremely rare[1,2]. A javelin is a type of spear, used for athletic competitions. Javelin throwers tend to have specific injuries or deformities of the elbow, shoulder, Achilles and lumbar spine [3-7]. The javelin rarely accidentally penetrates people on the athletic field [8,9]. This report describes an unusual type of abdominal wall self-injury sustained by an athlete attempting to throw a javelin.

CASE REPORT

A nineteen-old female was practicing to throw a javelin forcefully with a forward lean on an athletic field. The Javelin erroneously struck the ground and the opposite side (tail) of a relatively sharp edge of the Javelin penetrated her right abdominal wall after she lost her balance (Figure 1). After removal of the Javelin at the scene, she was transported to the hospital. Upon arrival, she was alert, her blood pressure was 100/68 mmHg and her heart rate was 70 per minute. She had two wounds on her right upper abdomen representing the entry and exit wound (Figure 2). A physical examination of her abdomen showed local tenderness of the wounds without guarding, and her bowel sounds

were well auscultated. An abdominal CT disclosed that the penetrating wounds were over the fascia of the lateral abdominal muscle without visceral injuries. Thereafter, the entry and exit wounds were opened, drawn together and irrigated with abundant sterilized saline under local anesthesia, and primarily closed. She was followed as an outpatient and the wound healed without complications.

The javelin (right) erroneously struck the ground and the opposite side (tail) with the relatively sharp edge of the javelin penetrated her right abdominal wall after she lost her balance (left).

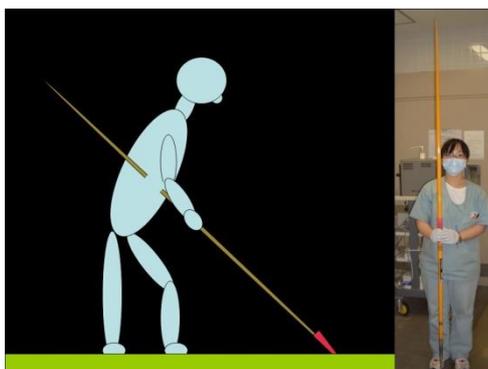


Fig-1: Pattern diagram at the accident scene



Fig-2: Patient's abdomen upon arrival

She has two wounds at right upper lateral abdomen consisted of an entry and exit wound.

DISCUSSION

This is the first report of abdominal wall injury induced by penetration by the tail of a javelin. There is only one previously reported case, of an abdominal wall hematoma after throwing a Javelin without any contact to the body reported by Irifune *et al.*[10]. The hematoma was spontaneously formed by abdominal muscle exertion due to the Javelin throwing movement [10]. While in developing countries, a spear is still used as a weapon. In such cases, abdominal injury induced by the spear commonly causes a retroperitoneal hematoma, hemorrhagic shock and peritonitis, and such injuries have the potential to be fatal[1].

An abdominal wall injury from the tail of a javelin is extremely rare. However, a change in the design of the opposite side of the javelin might help prevent further injuries of this type.

REFERENCES

1. Bordon LM. Penetrating abdominal spear injuries. *Cent Afr J Med.* 1992;38:155-61.
2. Jacob OJ, Rosenfeld JV, Taylor RH, Watters DA. Late complications of arrow and spear wounds to the head and neck. *J Trauma.* 1999;47:768-73.
3. Haw DW: Avulsion fracture of the medial epicondyle of the elbow in a young javelin thrower. *Br J Sports Med.* 1981;15:47.
4. Sing RF: Shoulder injuries in the javelin thrower. *J Am Osteopath Assoc.* 1984;83:680-4.
5. Hulkko A, Orava S, Nikula P. Stress fractures of the olecranon in javelin throwers. *Int J Sports Med.* 1986;7:210-3.
6. Schmitt H, Dubljanin E, Schneider S, Schiltenswolf M: Radiographic changes in the lumbar spine in former elite athletes. *Spine.* 2004;29:2554-9.
7. Kannus P, Natri A: Etiology and pathophysiology of tendon ruptures in sports. *Scand J Med Sci Sports.* 1997;7:107-12.
8. McFadden PM, Ochsner JL. Javelin injury to the subclavian artery. *Am J Sports Med.* 1981;9:400-4.
9. Inoue H, Hitosugi N, Cho T, Kamishima K, Kanayama T, Ogawa K, Arai T, Kuno Y, Tsuchida M, Okuda Y: A case of craniofacial injury by javelin. *Masui.* 2006;55:1416-9.
10. Irifune H, Kawaguchi S, Wada T, Nagoya S, Ishii S, Tamakawa M. Abdominal wall haematoma in an adolescent javelin thrower. *Injury.* 2001;32:339-40.