

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.elsevier.com/locate/apme

Case Report

Arthroscopic retrieval of bullet from knee

Raju Vaishya^{a,*}, Vipul Vijay^b, Harsh Singh^c, Amit Kumar Agarwal^b^a Senior Consultant, Department of Orthopaedics, Indraprastha Apollo Hospital, New Delhi 110067, India^b Consultant, Department of Orthopaedics, Indraprastha Apollo Hospital, New Delhi 110067, India^c Registrar, Department of Orthopaedics, Indraprastha Apollo Hospital, New Delhi 110067, India

ARTICLE INFO

Article history:

Received 16 December 2015

Accepted 16 March 2016

Available online 31 March 2016

Keywords:

Bullet

Arthroscopy

Knee

Foreign body

ABSTRACT

Knee joint can be commonly afflicted by foreign bodies which may be of varied nature. The problems associated with foreign body in the knee joint are associated soft tissue injuries, morbidity due to removal surgery, late onset infection, and arthritis. Arthroscopic retrieval of the foreign body can help decrease the morbidity associated with surgery. Bullet is an extremely unusual foreign body and has been rarely described in literature. We describe a rare case report of an intra-articular bullet caused by misfiring of a gun and its early arthroscopic retrieval. The 45-year-old policeman recovered well from surgery and had complete range of motion (0–130°) with no synovitis and minimal pain. Early arthroscopic-assisted retrieval can help achieve a satisfactory result and long-term outcome.

© 2016 Indraprastha Medical Corporation Ltd. All rights reserved.

1. Background

Knee joint is one of the universal joints for lodging of foreign bodies. The foreign bodies have been described to be varying from plastic bottle caps to glass.¹ A bullet in the knee is, however, a rare entity. A common cause of it is the purposeful shooting of the knee in criminals, but an accidental injury to the knee by a bullet is exceedingly rare. The reason for its common affliction is its superficial location of the joint, large size, and frequent involvement in trauma. Some challenges faced during the removal of the foreign bodies from the knee include the presence of charred, soft tissue, damage to bone and adjoining ligaments, intra-articular migration of the foreign body, dis-impacting the foreign body from its bed, and choosing the ideal procedure for its extraction.² The key to achieving good results is

eliciting proper history, extracting the foreign body while causing minimal iatrogenic damage, and good follow-up to look for any long-term side effects.

The superficial nature of the knee joint makes it amenable to arthroscopy-assisted minimal invasive removal of the foreign body. The advantages of an arthroscopic-assisted removal are minimal soft tissue damage, improved cosmesis, magnified visualization of joint damage, and early rehabilitation.^{1,3} We present a case report of a bullet in the knee, discuss its mechanism of injury, and describe its early arthroscopic removal.

2. Case presentation

A 45-year-old policeman who allegedly misfired a 0.38 caliber bullet from his service revolver, presented to our emergency

* Corresponding author. Tel.: +91 9810123331.

E-mail address: raju.vaishya@gmail.com (R. Vaishya).<http://dx.doi.org/10.1016/j.apme.2016.03.004>

0976-0016/© 2016 Indraprastha Medical Corporation Ltd. All rights reserved.



Fig. 1 – Clinical photograph depicting the entry wound of the bullet and hemarthrosis.

12 h after sustaining the injury to his left knee. According to the patient, he forgot to secure the weapon with his belt using a chain as is customary. While attempting to rise from his seat in the police van, the gun, which was tucked loosely in his belt, fell-off. Almost immediately, the weapon hit the floor and the weapon lock opened-up leading to misfiring of the gun as it tossed on the ground.

The knee was in a flexed position while disembarking from the van and came in the way of the bullet with the entry wound located just inferior-medial to the knee joint (Fig. 1). The bullet traveled three centimeters in the proximal tibia, over the inferior-medial aspect of left knee, joint before lodging in the inter-condylar notch of the knee joint. Initial wound dressing was done at a local center, following which patient presented to our emergency with a locked knee.

3. Investigations

The position of the bullet was confirmed on plain antero-posterior and lateral radiographs (Figs. 2 and 3). Since the retrieval of the intra-articular bullet was considered an emergent procedure, no other radiologic investigation was done. All other routine blood parameters were within normal limits.



Fig. 2 – AP radiograph of the knee depicting the bullet lodged in the knee in the inter-condylar notch.



Fig. 3 – Lateral radiograph of the knee confirming its position in the anterior aspect of the knee.

Download English Version:

<https://daneshyari.com/en/article/3234761>

Download Persian Version:

<https://daneshyari.com/article/3234761>

[Daneshyari.com](https://daneshyari.com)