

# HANDLING OF FOREIGN BODY BULLET ON LEFT SHOULDER WITH SURGICAL APPROACH USING ULTRASONOGRAPHY

(Case Report)

dr. M. Nasir Zubaidi, SP.OT(K)

## *Abstrak*

**Background :** Handling and the importance of surgical exploration in cases of air rifle bullets retained in the shoulder region is a challenge because of the difficulty of finding the bullet during exploration and preventing damage to vital structures. Ultrasonography is required to determine the location of the bullet retained into the surrounding structures and guide exploration. Ultrasonography plays a very important role that has enormous potential for early prevention, diagnosis, and providing advanced therapy to patients. Preoperative ultrasound modalities are essential prior to surgical exploration of retained air rifle bullets. X-ray and CT scan are imaging modalities that are often used as the initial assessment of retained foreign bodies. However, ultrasonography provides an advantage over X-ray and CT scan to provide real-time imaging that supports the surgeon during surgical exploration. Exploration with ultrasound can help to pinpoint the exact location of retained air rifle bullets. Conclusion Ultrasonography is a simple and precise real-time imaging modality to identify and guide exploration of retained air rifle bullets in the shoulder region.

**Case presentation :** A 34-year-old male patient came to the emergency department of the Orthopedic Siaga Utama Hospital with complaints of pain in the

left shoulder after being hit by an air rifle bullet since 1 hour. There are no other complaints.

**Method :** The patient is given local anesthesia with lidocaine to reduce pain so that the patient is more comfortable during exploration.

**Result :** The patient came with a complaint of pain in the left shoulder after an exploratory action using an ultrasound tool the bullet can be located and can be removed, after 1 week the control of pain complaints is reduced.

**Conclusion :** Ultrasonography is effective as an early prevention, diagnosis, as well as providing advanced therapy to patients.

**Keyword :** Ultrasonography, exploration of the left shoulder air rifle bullet.

## Introduction

A foreign body in the left shoulder presents its own challenges to find the bullet during exploration and prevent damage to vital structures, so more careful handling with imaging (USG) is needed.

Ultrasonography (USG) has developed over the decades, helping doctors to do early prevention, diagnosis, and providing further treatment to patients, computer-based medical image data processing has been proven to simplify the process more carefully, thoroughly in a short time.

The purpose of this paper is to report the treatment of a foreign body in the left shoulder suspected of being a bullet by surgery using an ultrasound device.

## CASE REPORT

A 34-year-old male patient came to the orthopedic hospital on main alert

with complaints of pain in his left shoulder after having been shot by air bullets since 1 hour yll. There are gunshot wounds, bleeding (+). There are no other complaints. Then an exploration was carried out using ultrasound to find out the location of the bullet and then an operation by an orthopedic doctor was carried out on May 21, 2022



Figure 1. X-ray results

A bullet entered the left shoulder which pierced the skin causing a wound on the skin surface. No neurological symptoms were found. Radiological results showed a

bullet in the shoulder. Surgical exploration is performed with ultrasound to determine the location of the bullet.

#### Supporting investigation

- a. L-lateral left shoulder X-ray on 21 May 2022 Conclusion: no fracture line, soft tissue within normal limits.
- b. Ultrasound photo



Figure 3. Ultrasound

- c. Exploration on May 21, 2022 starting at 11.16 12.00 WIB. Preparation of the patient during the procedure is given local anesthesia with lidocaine administration to reduce pain



Figure 4. Exploration activities with ultrasound equipment

- d.



Figure 5. Air rifle bullets

## **DISCUSSION**

Foreign body in the left shoulder is rare, usually caused by bullets, Foreign body cases due to air rifle bullets, mostly happened by accident, for example shot by a friend. Bullets at low speed have a lighter tissue damage effect than high-speed bullets. In general, injuries caused by low-velocity bullets cause little injury at the entrance or exit and only damage the tissue directly in contact with the bullet.

To identify the foreign object, it is necessary to do an X-ray first. Exploration is the main choice for evacuating bullets because it is safe and provides a small surgical wound to facilitate surgical access.

The exploratory procedure was started after 10 minutes post

lidocaine injection then excision was performed using a bisturi knife.

The removal of a foreign object suspected of being a bullet in the left shoulder aims to prevent further complications that the bullet must be removed immediately because it can cause pain and infection can occur if it lasts a long time.

## **CONCLUSION**

Foreign bodies suspected of being bullets are rare cases. A case was reported, a 34-year-old man came to the orthopedic hospital on the main alert with complaints of pain in his left shoulder after being shot by an air rifle, then X-rays and exploration using ultrasound were taken. After finding the location of the bullet then local anesthesia was given before surgery. The removal of a foreign object suspected of being a

bullet in the left shoulder is aimed at preventing early infection.