



MISSED FOREIGN BODY IN THE ARM - A CASE REPORT

<b>Dr. Anmol Singh*</b>	Government Medical College Chandigarh, India *Corresponding Author
<b>Dr. Adarshpal Kaur</b>	SMO (Surgeon), ESI hospital, Mohali, Punjab, India
<b>Dr. Manjit Singh</b>	Associate Professor, GMC&RH, Patiala, Punjab, India

**ABSTRACT** Missed foreign bodies are common following penetrating injuries. Keeping high index of suspicion and thorough history taking of penetrating injury supported by proper investigations help in early detection and appropriate management and thus limits the occurrence and extent of complications and morbidity.

**KEYWORDS** : foreign body, radio lucent, broom stick, exploration

**INTRODUCTION**

A foreign body is an object or piece of extraneous matter that has entered the body by accident or design. Commonly found penetrating foreign bodies can be from organic (e.g. wooden splinter, plant thorns, bamboo sticks) or inorganic sources (metal nail or shaving, glass, gravel).<sup>[1]</sup> Some of these can easily be detected using simple investigative tools as on a radiograph due to their radiopaque nature but many of these foreign bodies be very difficult to detect even after proper investigation due to their radiolucent nature and/or unusual location.<sup>[2,3]</sup> It is peculiar to note that over time, foreign bodies with sharp end tend to move deeper into the surrounding tissue with muscular movement. This may also lead to failure of foreign body extraction. The patient may tend to forget events of trauma in the remote past and may not inform the clinician about it. This could mislead the diagnosis and line of treatment which would delay delivery of proper management and relief to the patient.

**CASE HISTORY**

- A 30 years old female presented in the out patient department with pain in cubital fossa. There was no history of fever or recent trauma, The patient was put on analgesic and anti-inflammatory treatment and was advised follow up after 5 days. She reported back after 15 days with a painful swelling over medial aspect of cubital fossa and restricted and painful movements at the joint. On examination, the swelling was 2 cm in diameter, reddish in color, tender, firm in consistency, immobile, non fluctuant, local temperature was slightly raised. No pus point was present. Trochlear and axillary lymph nodes were not enlarged. There was leucocytosis with neutrophilia.

After thorough examination she was investigated and X-Ray elbow region was done which did not show any abnormality. [Figure 1] Furthermore, patient was advised Magnetic Resonance Imaging of the region which was inconclusive. [Figure 2]



Figure 1: X Ray Imaging of Right Elbow Region.

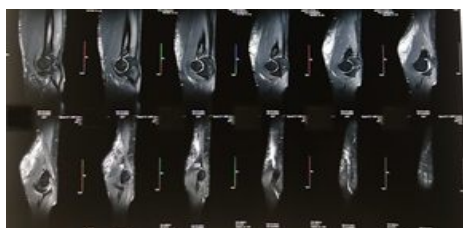


Figure 2: Magnetic Resonance Imaging of Right Elbow Region

The patient was prescribed a course of antibiotics for 5 days but the swelling did not subside and developed softening in the center. Fine Needle Aspiration Cytology showed necrotic material. Incision and drainage was done for the same under field block anesthesia. The incision was made over the cystic pole of the swelling, skin incised and a cavity detected in subcutaneous tissue. [Figure 3] About 1 ml of pus was drained. There was no foreign body inside the abscess cavity. The abscess cavity was surrounded by soft granulation tissue all around. Inside the cavity, a tract was seen traversing upwards and medially into the upper arm. [Figure 4] On following and probing the track, there was an incidental finding of a piercing linear foreign body. It was removed gently with the help of forceps. [Figure 5] It appeared to be a 4-4.5 cm long piece of broom stick. [Figure 6] The surrounding tissue was then palpated for presence of any concurrent foreign bodies. The cavity in the subcutaneous tissue was curetted. A corrugated drain was put in and the wound was closed over it. The drain was removed on post operative day 3. The wound healed primarily; the skin sutures were removed on post operative day 8.

On further prodding the patient came out with the history of injury with a broom stick while sweeping 3 months back. As speculated now, keeping in mind the relevant history, outside portion of the stick was drawn out but distal portion of the stick may have broken and remained inside tissues. Pain subsided and the wound which had healed without any intervention. She had remained asymptomatic for 2.5 months when she experienced the above mentioned complaints.



FIGURE 3: Incision made over the swelling



FIGURE 4: Cavity showing track



**FIGURE 5: Exploration of track revealing foreign body**



**FIGURE 6: Extracted broom stick.**

## DISCUSSION

History is a paramount tool for the proper diagnosis and treatment of any ailment in absence of which the pathology may remain neglected or may even be aggravated. The patient may not always remember the events of trauma and thereof fail to inform the clinician about a foreign body penetration. The lack of proper leads with variable/atypical presentation lead to foreign bodies being a challenge to detect.<sup>[4]</sup> Even after the foreign bodies are detected they may be a challenge to localise as over time, foreign bodies with a sharp tips tend to insinuate deeper into the surrounding tissue due to muscular movements. These foreign bodies if located in the vicinity of a joint may advance into the joint space. Here, it may setup intractable infective process which may erode the joint and can cause loss of the limb. It is very important to keep a high index of suspicion in cases such as unexplained abscess, chronic discharging sinus, granuloma so as to detect and remove such foreign bodies well in time and follow a proactive approach. Patient should be thoroughly inquired of any penetrating injury from which a possible foreign body may break off and remain inside the surrounding tissue.

The wounds of impacted organic foreign bodies may heal initially but may get infected internally later in time. These may present as an abscess or a chronically discharging sinus. If inert, it can also present as a granuloma.<sup>[5]</sup> Foreign bodies like gun shot pellets may not require removal if not indicated otherwise.

The primary and conventional approach of radiography often proves to be a very effective tool in the detection and localization of foreign bodies but it fails in cases where the foreign body is radiolucent foreign bodies such as wooden sliver, plant thorns, bamboo sticks present a challenge in absence of more sophisticated investigations.<sup>[2,3]</sup> In such cases magnetic resonance imaging and computerised tomography come in handy. These investigations are often costly which further deters their regular use in general masses. It is often noted that another fall-back of MRI is its difficulty to distinguish normal bodily structures with an innate low intensity signal e.g. calcifications, tendons, cicatrix from foreign bodies of similar magnetic imaging properties.<sup>[3]</sup>

## CONCLUSIONS

The possibility of a foreign body should always be taken under the diagnostic purview for a recurrent, unexplained infection or swelling.

For a clinician, keeping a high index of suspicion is always advocated and proper detailed history taking should be emphasized.

Early diagnosis and appropriate management can be of great in preventing serious consequences and morbidity.

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