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RESEARCH ARTICLE

CASE REPORT ON A UNUSUAL FOREIGN BODY IN AN UNUSUAL LOCATION

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Abstract

Incidence of a foreign body in the pediatric age group is not an uncommon scenario. We encountered a rare case of a pediatric male patient that presented to the OPD with a cystic swelling along with a granulomatous mass in the left inguinal region. On further investigations, he was found to have aunusual foreign body, a 7cm wooden pencil in the deep subcutaneous and adductor compartment of muscles in the medial aspect of left upper thigh. The wound was explored and the foreign body was retrieved successfully. This case is remarkable due to the unusual presentation of this child in the OPD, the unusual nature and location of the foreign body and the steps taken in the successful management of the case.

Introduction:-

Incidence of a foreign body in the pediatric age group is not an uncommon scenario.Most common mode of presence of foreign bodies in children is ingestion. The presence of foreign bodies in the paediatric age group more often than not turns out to be challenging in clinical practice for surgeons. Plenty of literature highlights presence and management of foreign bodies in the aerodigestive tract of children but incidence of a foreign body elsewhere in children is a rare entity. This case report highlights the presence of a unusual foreign body in a unusual locationin a paediatric male child and the steps taken in its successful management.

Case report:

A 9-year-old male child presented to the OPD with a history of a swelling in his left inguinal region since 3 months.The swelling had a cystic component along with granulomatous tissue and was not associated with pain. No specific history suggesting trauma or foreign body penetration was obtained from the child or the parent on initial interview.

History of a similar swelling in the same region5 months back was given for which he underwent wide local excision and debridement in an outside hospital. Biopsy was sent andhistopathological examination was suggestive ofnon-specific inflammatory granulation tissue. The swelling recurred after 2 months for which he presented to our OPD.

On examination: 3x2cm swelling present in left inguinal region below the inguinal ligament. Tender on applying pressure, soft & cystic laterally, bosselated granulation tissue present medially. No cough impulse present, skin surrounding the swelling was normal. No entry or exit wound or signs of penetrating injury present anteriorly.

A Healed Scar of 2X1cm was noted in left infragluteal region posteriorly.

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On further probing after examination, history of skin penetrating traumain school by friends, 7 months back, in theposterior infragluteal region by a wooden pencil was obtained. The superficial part of the penetrated pencil was retrieved then by a local quack. The child and the parent were unaware of the retained deeper and larger portion of the foreign body since the child had no complaints until the development of the cystic swelling in his left inguinal region 2 months later.

Haematological investigations were unremarkable with normal white blood cell count and normal biochemistry. Plain radiographs showed no apparent calcifications or foreign bodies.

CT showed a hyperdense foreign body.
MRI showed a well-defined linear non enhancing T1W/TZW hypointense area measuring approximately 7.6 x 0.6cm with surrounding susceptibility artifact which was noted traversing obliquely through adductor compartment muscles of medial aspect of left thigh. It was surrounded by T2W/STIR homogenously hyperintense encapsulated collection measuring approximately 2.4 x 2.6 x 10.5cm(volume 35cc) involving adductor muscles. Post-contrast study showed heterogenous enhancement. MRI suggestive of Intramuscular foreign body.

Patient was taken up for exploration with retrieval of foreign body. Entry was obtained through the swelling in left inguinal region. Wide local excision was done for the cystic swelling along with granulomatous tissue and wound was explored in the deeper plane. A 7x2cm wooden pencil was retrieved from deep subcutaneous and intramuscular compartment of medial aspect left upper thigh. Along with it around 30-40cc pus was drained and an infected tract probably through which the foreign body traversed anteriorly in the thigh was excised. Histopathological examination of the tract showed proliferation of inflammatory cells.

Post operative period was uneventful. Patient was discharged on POD 8 with a clean suture line.

Figure 1:- Nine-year-old boy with foreign body granuloma.

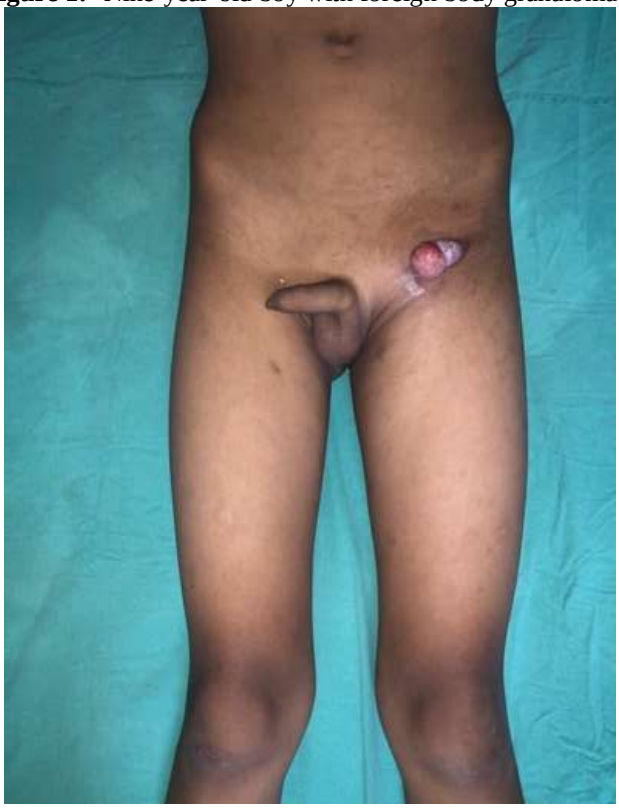


Figure 2:- Plain CT -Foreign body.

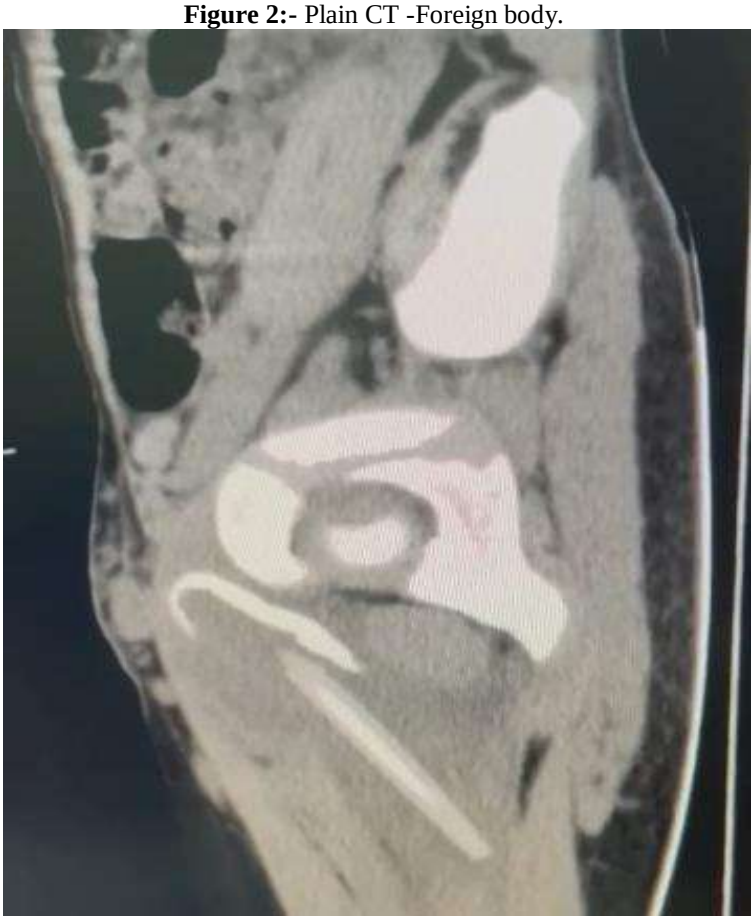


Figure 3:- A and B MRI – Intramuscular foreign body with collection.

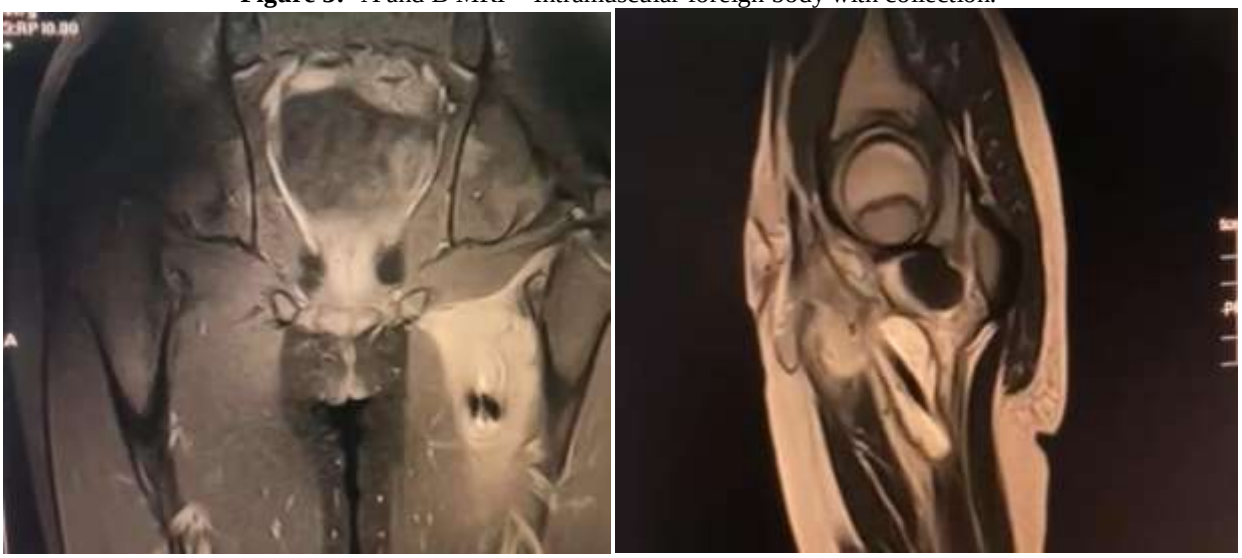
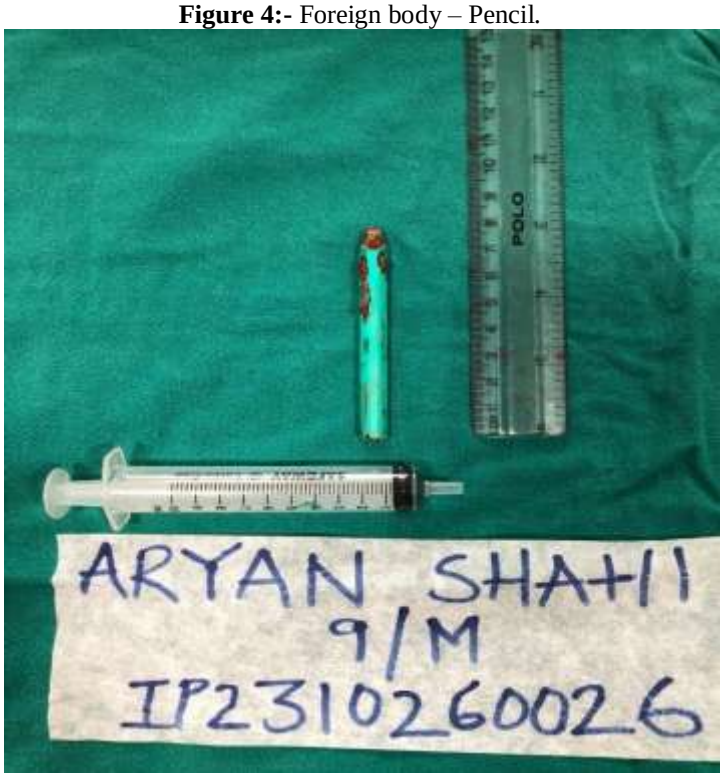


Figure 4:- Foreign body – Pencil.



Discussion:-

The presence of a wooden foreign body(pencil) in a child's antero-medial compartment soon after a puncture injury to the infragluteal region is rare in the literature.

As we all understand presence of a foreign body in any soft tissuecauses reactionary granulomatous inflammation. It is documented that the foreign body in the subcutaneous region tends to be diagnosed easily, although it is difficult to anticipate and diagnose foreign bodies if the patient is unaware of the injury. FBs can be found deep inside the subcutaneous tissue or can be too small for clinical identification by palpation, necessitating surgical intervention in order to identify and retrieve them.

A foreign body granuloma can often be misdiagnosed as a primary soft tissue tumour when history of previous trauma is not available and the foreign body inside the lesion is not identified radiologically.

Foreign bodies can mimic tumours, migrate and cause significant morbidity, cause acute and chronic pain, infections, and limitation of daily activities. There have even been claims of pseudoaneurysms[6] and life-threatening infections secondary to FBs,[4] It is certainly reasonable to try to extract them anytime possible.

Murphy et al detected a suture granuloma masquerading as a malignancy of the biliary tract [7].Mak et al reported on an intrapelvic mass resulting from reaction to wear debris after total hip arthroplasty. Chang et al described a granulomatous reaction to a failed metal-backed patellar component following total knee arthroplasty, which presented as a giant calf mass [9,10]

Plain radiographs can be used to detect radiopaque foreign bodies but is challenging in the case of radiolucent objects. Plain radiography has been reported to reveal a wooden foreign body in only 15% of patients. Ultrasonography has been studied for the detection and localization of foreign bodies and proved to be sensitive and specific. CT is superior to MRI in identifying radiopaque foreign bodies but does not have an advantage for the detection of radiolucent foreign bodies and visualization of the surrounding reactive lesion. In this case MRI clearly shows the collection around non enhancing foreign body. USG is preferred due to its accessibility and low cost.

It has also been shown that apart from direct impalement, foreign bodies have also migratedto the thigh by such routes as transperitoneal migration.

Conclusion:-

The human body, especially the foot and hand, is inevitably exposed to skin-penetrating trauma but other areas of body should not be neglected in case of skin penetrating foreign body injuries. A Foreign body granuloma should always be suspected even in absence of skin penetrating trauma.

This case was remarkable due to various aspects. Thorough history with meticulous examination and appropriate radiological investigations have proven to be helpful in such rare presentations of foreign body granulomas. Surgical experience and expertise is a must in retrieval of such foreign bodies especially in the paediatric age group.

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