

ACCIDENTAL INGESTION OF PADLOCK PRESENTING WITH RESPIRATORY DISTRESS: A CASE REPORT AND REVIEW OF LITERATURE.

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Abstract- *Ingestion of foreign body is a relatively common clinical scenario with variable presentations. Majority of the swallowed objects will pass spontaneously but serious complications such as obstruction, bowel perforation or hemorrhage can occur. These risks are dependent on location and type of the object. Radiographic demonstration and definition of the foreign body may be useful to determine appropriate management and follow up of the patient. Metal foreign objects are heavily researched in the literature. However, reports on padlock ingestion specifically are rare. We document a case of accidental ingestion of padlock presenting with respiratory distress. It emphasizes the importance of high index of suspicion and the role of plain radiograph in the management of such patient.*

INTRODUCTION

Ingestion of foreign body (FB) is a potential surgical emergency. The object(s) swallowed, either accidentally or purposefully, may cause serious complications such as respiratory or gastrointestinal obstruction, bowel perforation or hemorrhage. However, most of these objects will pass spontaneously. Since most children who ingest FB are asymptomatic, attending physicians and parents must have a high index of suspicion [1]. Adults usually have problems with bones (meat and fish) and food impactions [2-5].

Identification of the type and shape of the foreign body ingested with imaging or/and other techniques is imperative as the management protocols are specific for such objects as coins, button batteries, small toys, pins, etc [3-4].

In this report, we describe a case of accidental ingestion of padlock presenting with respiratory distress. It emphasizes the importance of high index of suspicion and the role of plain radiograph in the diagnosis and management of FB ingestion.

CASE PRESENTATION

A 11/2 - year-old male child presented to the accident and emergency unit of ABU Teaching Hospital Zaria with a 20-minute history of difficulty in breathing following accidental ingestion of a padlock while playing. There was associated drooling of saliva and vomiting. There was no history of cough and the review of other systems was essentially normal.

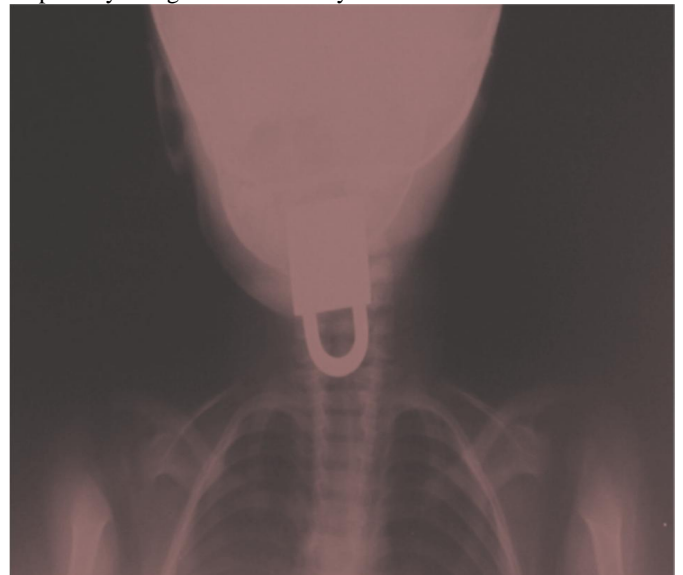
Clinical examination revealed a young child in respiratory distress, with flaring of the alae nasi and stridor. He was not cyanosed. There was tachypnoea with respiratory rate of 48 cycles per minute. The chest was clinically clear and the cardiovascular system was normal. With the aid of spatula, a

metallic FB was visualized in the throat. A clinical diagnosis of FB ingestion was made.

The urgent cervical x-ray (AP and lateral) revealed opacity of calcific density (padlock) arrested in the throat anterior to C₂ to C₇ vertebral bodies. The inferior portion of the padlock was posterior to the trachea (FIGURES 1 & 2) indicating that it was in the oesophagus.

A direct laryngoscopy with removal of the padlock using Mc-guil forceps was carried out under anaesthesia. He was discharged to the surgical outpatient clinic after 24 hours of observation.

At one week and two months clinic follow-up, his respiratory and gastrointestinal systems were normal.



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DISCUSSION

FB ingestions or insertions are seen in four broad categories of patients: Children, mentally handicapped or mentally retarded persons, adults with unusual sexual behavior and, normal adults or children with predisposing factors or injurious situational problems [6].

The vast majority of all swallowed objects pass through the gastrointestinal tract without problem [7]. However, elongated or sharp objects like needles and bobby pins are more likely to lodge at areas of narrowing or to impinge at regions of anatomic acute angulation such as duodenal loop, duodeno-jejunal junction, appendix, and ileocecal valve [7]. Large spherical or cylindrical ones may pass through the esophagus only to be halted at the pylorus. Some FB that are large and round (e.g. coins, meat) may impact at the thoracic inlet, gastroesophageal junction, or an area of stricture [8-9]. The diagnosis of an ingested FB is often overlooked in those patients who cannot furnish adequate history or who have swallowed objects that are not inherently opaque [10-11]. The former scenario is the case in our patient. He presented in respiratory distress and his parents were not with him when he swallowed the padlock. His diagnosis was straight forward on plain x-ray of the neck. However, in selected cases, contrast studies with barium tablets, barium capsules, barium impregnated cotton balls or barium-coated food may be necessary [11]. Our patient did not require these

enumerated contrast techniques. In some cases also, computed tomography (CT) scan of the abdomen or chest may be helpful, particularly if an unusual area of opacity or lucency is found at radiography, and the diagnosis of a perforating FB is entertained [12].

Some authors [13] have advocated the use of metal detectors in identification of metallic FB. The reasons advanced include absence of ionizing radiation and the fact that a clinician can easily detect the site of the object in his consulting room and intervention taken immediately.

Whenever there is a history of FB ingestion, the patient should be examined from the nasopharynx to the anus. Often, there is ingestion of more than one object, and the search for FB should not be suspended just because one has been found. Children are especially prone to ingest objects in multiple [12-13]. For our patient, the immediate goal was to relieve obstruction and then search for other possible FB. But, he became stable and there was therefore no need to subject him to further ionizing radiation when he was symptom-free.

Less than 1% of ingested FB causes perforation of the gastrointestinal tract [14]. Sharp and elongated objects such as fish bones and tooth picks are the most likely to penetrate the bowel or oesophageal mucosal lining and cause significant injury to the bowel wall or frank perforation [14]. Perforations are more common in the ileocecal region, especially in a Meckel diverticulum and the appendix. In the index case, the padlock was arrested at the level of the pharynx, which is higher than the enumerated common sites of perforation.

The treatment protocols depend on the specific object ingested. Some simply require observation as such FB will soon be passed per rectum. Others may warrant emergency endoscopic removal e.g. button batteries or sharp objects in the oesophagus. Surgical removal is considered for blunt objects beyond the stomach that remain in the same location for more than one week [3-4]. A direct laryngoscopy with removal of the padlock was carried out in our patient. His response was good and subsequent follow-up visits were satisfactory.

CONCLUSION

Accidental FB ingestion is a common clinical problem with variable presentations. The key to diagnosis is a high index of suspicion. Appropriate imaging modalities such as plain radiograph may be necessary for proper localization and definition of the object for timely intervention. Continuous education of parents on basic home-safety measures and avoiding leaving objects within the reach of children are useful preventive strategies.

DISCLOSURE

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