

Intra-Appendicular Metallic Foreign Body: Case Report and Review of Literature

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Abstract

Case Report

Intra-appendicular foreign bodies are rare incidences that can lead to appendicitis. We report the case of a 24 year old female patient who was diagnosed an appendicular syndrome one week after accidental ingestion of a pin, hence the indication for appendectomy.

Keywords: Intra-Appendicular, Metallic Foreign Body Literature.

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INTRODUCTION

Intra-appendicular foreign bodies are rare events [1], their prevalence being estimated at 0.0005% with an incidence of 5 cases per 10 million populations [1, 2, 4]. The first case in history was described in 1736, when an 11-year-old child was found to have an appendicular perforation by a pin, leading to the first appendectomy in history by the British surgeon Claudius Amyand [5]. The diagnosis is often made in the context of accidental or deliberate ingestion of metallic foreign body when an appendicular syndrome is present and the image of foreign body persists in the right iliac fossa after ingestion.

PATIENT AND OBSERVATION

A 24 year old female patient who accidentally ingested a pin, the patient presented with right iliac fossa pain radiating to the hypogastrium one week after ingestion, which led her to consult the emergency room. The clinical examination on admission revealed a febrile patient at 38.5°C with tenderness in the right iliac fossa. Abdominal ultrasound suspected a foreign body in the right iliac fossa, abdominal CT scan showed a metallic foreign body intra-appendicular without radiological signs of peritonitis (Figure 1). The patient was admitted to the operating room, where surgical exploration revealed an inflamed appendix with an incarcerated pin within its lumen (Figure 2), with no intraperitoneal effusion or collection and no wound on the adjacent viscera. The procedure performed was an appendectomy (Figure 3), the postoperative course was uneventful.



Fig-1: Abdominal CT scan. Presence of a metallic foreign body intra-appendicular without radiological signs of peritonitis

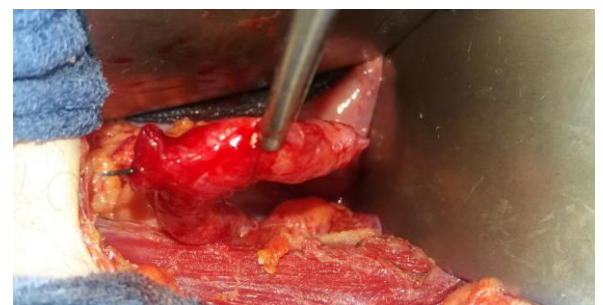


Fig-2: Inflamed appendix with an incarcerated pin within its lumen



Fig-3: Surgical sample. Appendix with intra-luminal pin

DISCUSSION

Foreign body ingestion is a frequent entity, it is often observed in children [6, 7] as well as adults either accidentally or voluntarily especially in the context of psychiatric illness or particular contexts (psychomotor retardation, consumption of toxic substances, wearing of dental prostheses ...) [7, 8]. The presence of an intra-appendicular foreign body is a rare entity, 256 cases were reported in the 20th century [4], various objects were found; meat bones, needles, small stones, hair, nails, and even the tip of a thermometer [2,3,9,11] as well as a few exceptional cases of foreign bodies of dental origin (prostheses, teeth, etc.) [1, 12, 13].

Digestive foreign bodies tend either to be eliminated spontaneously via the lower tract in the direction of peristalsis after a week and remain asymptomatic [1, 7, 14] or to implant themselves at the level of physiological strictures [7, 14, 15]. Penetration of a foreign body into the appendix from the cecum depends on its weight; the diameter of the appendicular orifice as well as the anatomical position of the appendix, the retrocaecal appendix gives difficult access for foreign bodies [1, 2, 4]. Peristalsis is often insufficient to evacuate an intra-appendicular foreign body due to the formation of a faecal layer around the foreign body [4], and this may also delay the onset of an inflammatory reaction, which may take hours to months [16,17]. Rare cases of appendicitis have been described several months after ingestion [10, 18].

An intra-appendicular foreign body is manifested mainly by abdominal pain, particularly in the right iliac fossa, associated with vomiting and fever [1, 2, 4, 7]. According to the literature, 70% of intra-appendicular foreign bodies are symptomatic, with a clinical examination that may reveal tenderness in the right iliac fossa or even signs of localised or generalised peritoneal irritation [4, 7].

The management of an intra-appendicular foreign body depends on the clinical features and time of onset of symptoms. The most common complications are acute appendicitis as well as appendicular abscess which may result from appendiceal perforation. The frequency of these complications increases with sharp objects larger than 6 cm in length and/or 2.5 cm in diameter [7, 8, 15]. Endoscopic intervention may be suggested when possible. In case of failure or complication, appendectomy is indicated [4].

CONCLUSION

The intra-appendicular foreign body is a rare situation in our context, with frequent complications, and endoscopic extraction is proposed in the absence of complications. However, laparoscopic appendectomy remains the best therapeutic option.

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