

Medi Quest BRS Hospital

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UNUSUAL FOREIGN BODY AS A CAUSE OF INTESTINAL OBSTRUCTION

CASE REPORT

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ABSTRACT

Foreign body ingestion is a common problem encountered in the paediatric age group. The common foreign bodies in children include coins, needles, pins but the dangerous foreign bodies in children are lead button batteries and recently magnets. We present a case of magnet ingestion and its favourable surgical outcome.

KEYWORDS: Foreign body, Magnets, Intestinal perforation.

INTRODUCTION

The most common Foreign Bodies include coins, small batteries, jewelry and recently magnets. Most are innocuous and pass without causing problems. Single ingested magnets do not cause specific problems. However, multiple magnetic foreign bodies can cause serious complications[2]. Two or more magnetic objects lying into different intestinal loops may produce a considerable attraction force with consequent crushing of intestinal walls[3]. In many cases, the clinician cannot depend on the accuracy of the history given by the child a high index of suspicion needs to be kept in mind regarding ingestion of multiple magnets. Complications associated with multiple magnetic FB ingestions include

Intestinal obstruction, Volvulus, Fistulae, Adhesions and Perforations[1]. Here we report a case of multiple magnetic chain who presented to our ER and its management and successful outcome.

Figure 1: X Ray Abdomen showing Radio Opaque Foreign Body.(Magnets)



Figure 1:

Case report

A 2 year old girl presented to our Emergency Room(ER) with diffuse abdominal pain which was colicky in nature. She also had episodes of vomiting and constipation since 2 days. On examination the child had mild dehydration and tachycardia.



Examination of the abdomen revealed mild abdominal distension . Routine baseline blood investigations were sent which revealed no abnormality. Erect x-ray abdomen revealed, what appeared to be a necklace of radiopaque balls (Figure 1).

On retrospective questioning the following history was obtained . 45 days prior to admission the mother purchased a magnetic ball set from an online store. A fortnight after making the purchase the patient had intermittent episodes of abdominal pain without vomiting ,no loose stools or blood in the stools, and a week prior to admission she had an episode of severe abdominal pain lasting three hours which subsided with symptomatic treatment . Around this period the patient was witnessed by a relative to be seen swallowing these magnetic balls , the mother was alerted and the magnetic balls were taken away from the child. On the day of admission the child had another episode of severe abdominal pain and a plain X Ray abdomen revealed the presence of swallowed magnetic balls.

Operative course

After adequate resuscitation patient was taken up to the operating room for an exploratory laparotomy.

The magnetic chain /necklace was seen as soon as the abdomen was opened in the peritoneal cavity, having come through the bowel wall with 50 magnets stuck to each other (Figure 2). Intra-operatively, two terminal ileal loops were found to be stuck to each other with magnet induced perforations in both loops with bluish discoloration of surrounding areas.(Figure 3).The magnetic chain was retrieved. Multiple perforations in the bowel were identified after removal of the magnetic chain (Figure 4). Perforation closure was done after freshening the edges. Child recovered well after initial ICU stay and monitoring.

Figure 2,3: Extrusion of foreign body (Magnets) into the peritoneal cavity with Ileal perforations

Figure 4:Perforations in the bowel after removal of magnets

Figure 5: Garland of Magnets retrieved



Figure 2



Figure 3



Figure 4

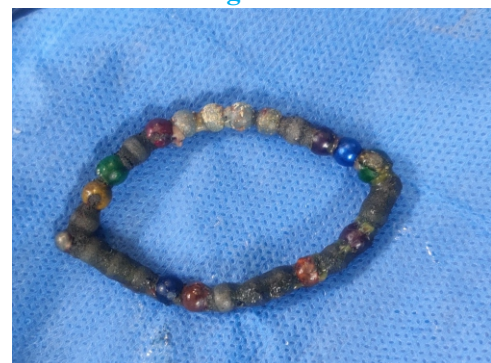


Figure 5



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Foreign body ingestion poses a serious health hazard to children. There are a variety of foreign bodies that can be ingested by the child. The most common being coins, needles, pins but the dangerous foreign bodies in children are lead button batteries and recently magnets.

Magnetic balls are used to create shapes which seems to be a popular play activity in children and adults . A YouTube video titled [Playing with Magnetic Balls, | Magnetic Games](https://www.youtube.com/watch?v=wmYEX3VnZn0) uploaded in 2017 has gained more than 42 million views accounting for its following <https://www.youtube.com/watch?v=wmYEX3VnZn0>



Figure 6: Magnetic balls

Multiple magnet ingestion is an unexpected health hazard that can lead to significant morbidity. A proper history is important to help identify between single and multiple magnet ingestion, but reliable documentation of ingestion may not always be present[4]. Hence the surgeon always needs to keep a high index of suspicion about multiple magnet ingestion. It is not always possible to differentiate between the magnets on imaging as they can be stuck to each other and give a false picture of a single object on imaging. If single magnet is suspected, normal progression through the bowel can be monitored closely with expulsion of the magnet through a bowel movement[5]. On the other hand if there is a suspicion of multiple magnet ingestion then there is a risk of perforation that could occur anywhere in the gastrointestinal tract. Hence these cases should be reviewed immediately by the surgeon with an aim to remove the offending agent. An early surgical intervention is imperative to prevent significant morbidity and mortality in such cases [6].

CONCLUSION

Thus magnets ingestion can prove to be fatal if left untreated. We discuss here the management of ingested magnets by a child and the successful surgical outcome. In the U.S.A. there is now a ban on the production and use of magnetic toys. The carry home message is if there are multiple magnets ingested it requires a surgical intervention even if asymptomatic.

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