Magnetic Attraction: Dual Complications in a Single Case
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ABSTRACT
A case report of a 19-years-old mentally retarded girl, presented with abdominal pain, nausea and vomiting of two days duration. Physical examination revealed abdominal tenderness with guarding and rigidity. Exploratory laparotomy revealed the presence of magnets in the jejunum with perforation of jejunum and a resultant gastro jejunal fistula. The procedure involved enterotomy for removal of magnets, resection of the segment of the bowel with fistula and perforation and end-to-end anastomosis. The association of ingested magnets, leading to dual complications, is a rare case ever reported in Dubai.

Key words: Foreign body. Magnets. Fistula. Perforation.

INTRODUCTION
Ingestion of foreign body is common in young children and in mentally retarded adults. Most of the published cases of magnetic foreign body ingestion are reported in Asian literature, because magnets were used for treatment in traditional medicine. Cases of multiple magnet ingestion are rare. However, serious complications can arise because these can be attracted to each other through the intestinal wall, causing necrosis, intestinal perforation, fistula formation or intestinal obstruction. We report an interesting case of combined gastro-jejunal fistula and intestinal perforation due to ingestion of multiple magnets.

CASE REPORT
A 19-year-old mentally retarded girl was presented with nausea and vomiting, and abdominal pain of two days duration. Physical examination revealed abdominal tenderness with guarding and rigidity. At the time of admission, leukocyte count was 26,900/mm³, hemoglobin, haematocrit, platelet count, electrolytes and serum creatinine were within normal limits. Radiograph of abdomen and pelvis showed the presence of two large bracelet shaped metallic foreign bodies in the pelvis (Figure 1). In view of her abdominal findings, an exploratory laparotomy was performed. On exploration, there was pus in the peritoneal cavity and a perforation in the proximal jejunum at the site of the metallic object along with a fistula between the stomach and the jejunum (Figure 2). The procedure involved enterotomy for foreign body removal, resection of the segment of the small bowel with perforation and gastro-jejunal fistula, closure of the opening in the stomach and end-to-end anastomosis.

The extracted foreign bodies were six egg shaped magnets stuck to each other in a circular manner with two 1cm size flat batteries (Figure 3). The postoperative recovery of the patient was smooth, and she was discharged on the 14th postoperative day. Specimen was examined and confirmed by the pathologist as fistula formation.

DISCUSSION
Multiple magnet ingestion is an unexpected health hazard that can lead to significant morbidity. In this case report, the ingested magnets caused complications of fistula formation and perforation. The magnet ingested first progressed to the jejunum and further...
progress was halted by the attraction to other magnets ingested later, which were in the stomach. The attraction of the magnets in the stomach and jejunum across the mesocolon compressed the respective walls between the magnets. The affected area became necrotic and formed a fistula between the stomach and the intestine. The large size of these combined magnets compressed the wall of the intestine resulting in the perforation leading to peritonitis.

Cases of magnet ingestion are reported from Japan and Korea, where magnets are used for the treatment of stiffness of neck and shoulders. These magnets are small enough to be swallowed easily and can cause complications, if more than one is swallowed. Intestinal obstruction and perforation following ingestion of magnetic backed earrings has also been reported.

The diagnosis depends on the clinical history of foreign body ingestion and confirmation by radiograph. Contrast studies with Gastrograffin may be required in excluding or locating the site of impaction of the foreign body as well as determining the level of perforation.

An early surgical intervention is imperative to prevent significant morbidity and mortality in such cases. With the advent of the laparoscopic surgery, it has been found to be very useful for the removal of intraluminal foreign bodies, especially, laparoscopic removal of multiple magnets and successfully performed repair of magnet induced perforation has been reported.

In conclusion, there should be a high index of suspicion for complications in such cases, and an early surgical intervention is recommended.

**REFERENCES**