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IMAGE | ENDOSCOPY

The Lost Buckyballs

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Case Report

A 15-year-old female with no past medical history presented 3 hours after ingesting 2 Buckyballs she had been using to create a mock tongue piercing. Buckyballs are 5-mm magnets made of neodymium, which is 5 times more powerful than a regular magnet. They are used as educational toys and as an artistic medium. Buckyball stopped production in 2012 after many cases of ingestion and a United States Consumer Product Safety Commission lawsuit.[1] On exam, her abdomen was soft, nontender, and nondistended. An abdominal x-ray showed 2 radiopaque objects in the mid-abdomen (Figure 1). Colonoscopy revealed a normal colon and terminal ileum without visualization of the Buckyballs. During a retrograde double balloon enteroscopy, the enteroscope was advanced over 150 cm into the small bowel without visualization of the Buckyballs. Fluoroscopy confirmed that the Buckyballs had migrated to the right lower quadrant. The enteroscope was reduced under fluoroscopy until the tip of the scope was at the site of the Buckyballs in the cecum; however, the Buckyballs still could not be located (Figure 2).

The appendix was intubated, and a round, metallic object was seen wedged in the lumen (Figure 3). A 0.035 Dreamwire™ (Boston Scientific, Marlborough, MA) was advanced beyond the Buckyballs into the appendix. Attempts to endoscopically extract the Buckyballs using a 9 mm/12 mm Extractor™ Pro RX Balloon (Boston Scientific, Marlborough, MA), a Memory Basket® soft wire (Cook, Winston-Salem, NC), a Talon™ grasping device (US Endoscopy, Mentor, OH), and an EndoGator® (US Endoscopy, Mentor, OH) were unsuccessful. Laparoscopic appendectomy was finally performed to recover the Buckyballs, and the patient recovered without complication (Figure 4).

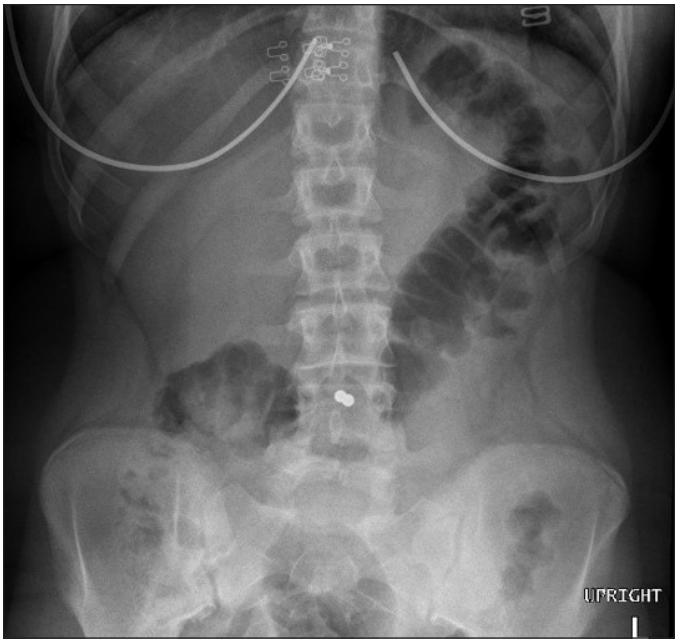

Figure 1. Abdominal x-ray showing 2 radiopaque objects in the mid-abdomen.

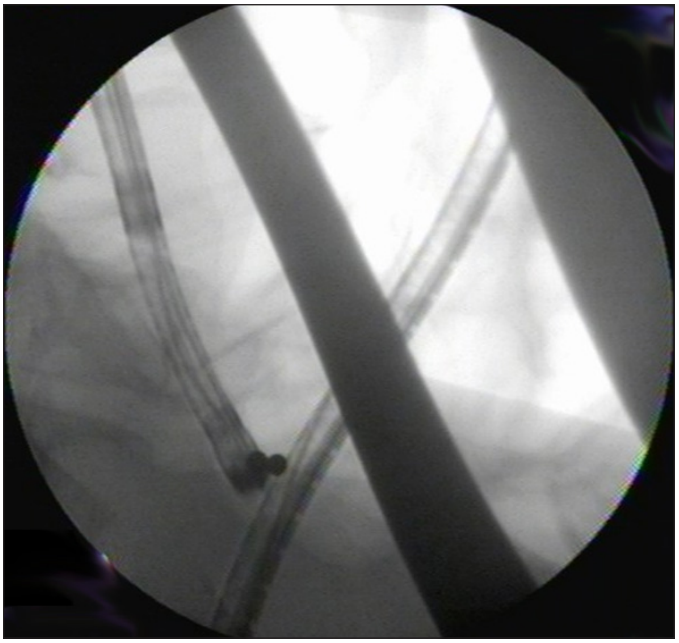

Figure 2. Fluoroscopy showing the Buckyballs in the cecum.

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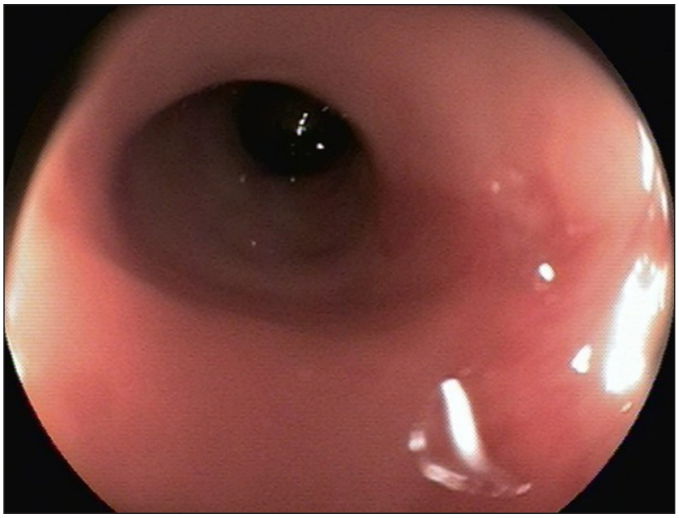

Figure 3. Round, metallic object was seen wedged in the lumen upon appendiceal intubation.

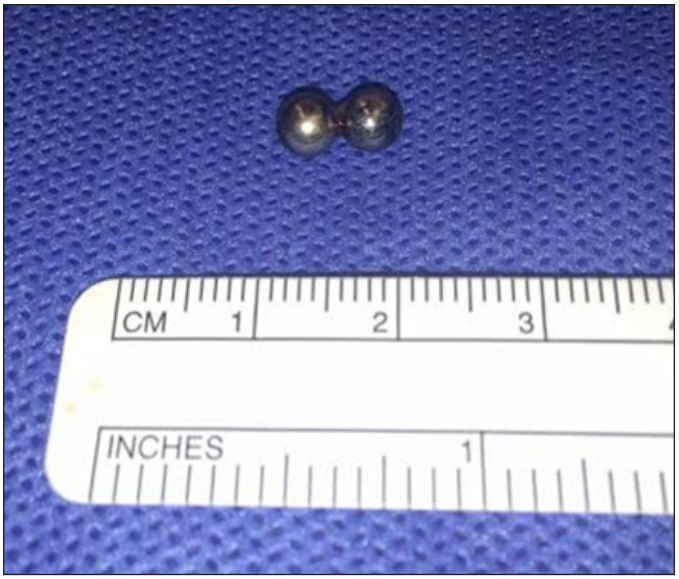

Figure 4. Buckyballs recovered from the patient's appendix.

Magnetic foreign body ingestion is most common in the pediatric population.[2] The ingestion of 2 or more magnetic foreign bodies poses the highest risk, as the force between 2 magnets can trap a portion of bowel, causing necrosis, perforation, obstruction, or volvulus.[3] It is recommended that each magnetic foreign body be removed endoscopically. If they are not in endoscopic reach, it is recommended that the foreign bodies be removed surgically.[4] We were unable to endoscopically remove the Buckeyballs from this patient, but prompt identification by enteroscopy prevented appendiceal necrosis and perforation.

Disclosures

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Informed consent was obtained for this case report.

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