Clinica Note

Intestinal obstruction following accidental ingestion of a foam rubber ball

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ABSTRACT

Foreign object ingestion is a common event during childhood, though it can also be seen at any age, generally in association with neurological or psychiatric disturbances. Nevertheless, this possibility should not be ruled out in people without a suggestive history, considering that even though most of those foreign objects progress down the digestive tract without difficulty, a far from negligible amount are potentially dangerous and may even require an aggressive therapeutic approach. We present the case of a young woman, with no past medical or surgical history, who initially presented with several episodes of abdominal pain that were diagnosed as non-specific, and finally developed an intestinal occlusion of unknown etiology. Initially, the iconographic studies did not reveal any cause; a colonoscopy was finally performed, which was both diagnostic (accidental swallowing of a foam-rubber ball) and therapeutic.

Key Words: *Swallowed foreign object. Intestinal occlusion. Colonoscopy. Foam-rubber ball.*

RESUMEN

Obstrucción intestinal tras ingesta accidental de una pelota de espuma

La ingestión de cuerpos extraños es un hecho frecuente en la infancia, aunque puede presentarse a cualquier edad, generalmente en relación con patologías neurológicas o psiquiátricas. No por ello debemos descartarla en personas sin dichos antecedentes, teniendo en cuenta que, aunque la mayoría de dichos cuerpos extraños avanzan por el tubo digestivo sin inconvenientes, un número no despreciable, son potencialmente peligrosos y pueden requerir un conducta terapéutica agresiva. Presentamos el caso de una mujer joven, sin antecedentes de interés, que debutó inicialmente con varios episodios de dolor abdominal etiquetados de patología banal y que finalmente desarrolló un cuadro oclusivo intestinal de etiología no filiada. Los estudios iconográficos no determinaron inicialmente la causa, y finalmente una colonoscopia fue la prueba diagnóstica y terapéutica de la misma, la ingestión accidental de una pelota de espuma.

Palabras clave: *Cuerpo extraño. Obstrucción intestinal. Colonoscopia. Pelota de espuma.*

INTRODUCTION

The accidental or voluntary ingestion of foreign bodies, edible or not, has become an increasingly common cause for medical emergency among the population at large, although with a higher incidence among patients with psychiatric conditions and, to a lesser degree, in patients with eyesight problems, drug addictions, alcoholism and in children, all hand in hand with the fast intake and under-digestion of food[1].

Here we present the case of a colonic obstruction, secondary to the accidental ingestion of a foam rubber ball 2 months previously, which had initially presented with non-specific abdominal symptoms. Despite its size (diameter of approximately 8 cm), the ball impacted in the proximal colon. In such cases emergency services should adopt a high degree of suspicion and fast and effective handling so as to prevent complications typical of foreign body ingestion and forestall the development of infrequent (1%) but possible peritonitis secondary to the perforation[2].

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Received: 5-2-2007
Accepted: 10-5-2007

CLINICAL CASE

A female aged 35, with no relevant medical, surgical or psychiatric history presented to the emergency unit of our hospital reporting colicky abdominal pain, vomiting and diarrhoeic stools. She reported a similar episode one and a half months previously which was diagnosed as probable gastroenteritis and which was spontaneously cleared. She was admitted under observation with saline drip and nil by mouth, having evolved well and discharged after 48 hours. She presented once again 24 hours later with general malaise, abdominal pain and vomiting, showing signs of diffuse peritonism on exploration. Blood analysis yielded the following results: Hb: 12.1 g/dl; Ht: 36%; white blood cells: 10.300 (N:73, L:13, M:7 and E:6), ions and coagulation al within normal range. A simple abdominal radiography (upright and prone) showed dilation of the small-bowel ansae with gas moving with changes in body position, with little transfer thereof to the descending colon and rectal ampulla, with no evidence of pneumoperitoneum. Abdominal ultrasound showed dilation of small bowel ansae with hydoaerial levels and intra-abdominal free fluid compatible with occlusion-subocclusion. On the 4th day of conservative treatment, given the poor clinical evolution, an abdomino-pelvic CT scan was performed with contrast, showing a marked dilation of the small-bowel ansae in all segments with fluid-gas content and no parietal alterations, as well as dilation of the caecum and right colon, with the remaining colon appearing to be of normal calibre, and a minimal amount of free fluid. In light of the poor clinical and haemodynamic evolution of the patient, a colonoscopy was performed, this showing fibrin-covered multiple superficial ulcerations in the terminal ileum and mucosa oedema (biopsies performed) and, more proximally at about 15 cm. from the valve, a voluminous foreign body (Figure 1). Extraction thereof was performed by means of a snare (Figure 2) with some difficulty, producing a piece of foam ball (Figure 3) which the patient then remembered having ingested involuntarily 2 months previously whilst playing. After extraction of the said foreign body the symptoms disappeared and patient was discharged after 72 hours.

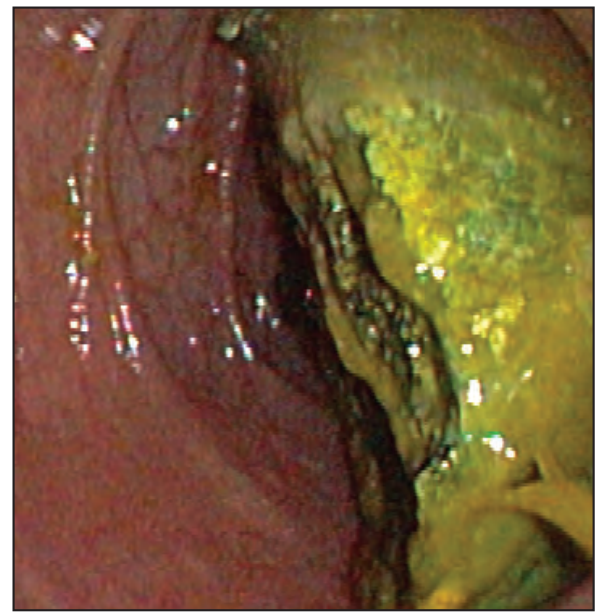

Figure 1. Endoscopic image of foreign body in terminal ileum.

DISCUSSION

As we have already mentioned in the introduction to this article, the ingestion of foreign bodies is an increasingly frequent clinical event. In 90% of the cases there is no evidence of lesions in the digestive tract, and in the remaining 10% they can cause occlusions such as that described herein or in the acute abdomen with intestinal perforation, with a probable fatal result (some 1,500 people die each year in the United States due to the ingestion of foreign bodies)[3].

Ingestion of foreign bodies can either take place in an involuntary or unaware fashion, or consciously and voluntarily. Unaware ingestion is more common in children, teenagers and the elderly, which was not the case in our patient (35-year old female), alcoholics, drug addicts, the mentally handi-

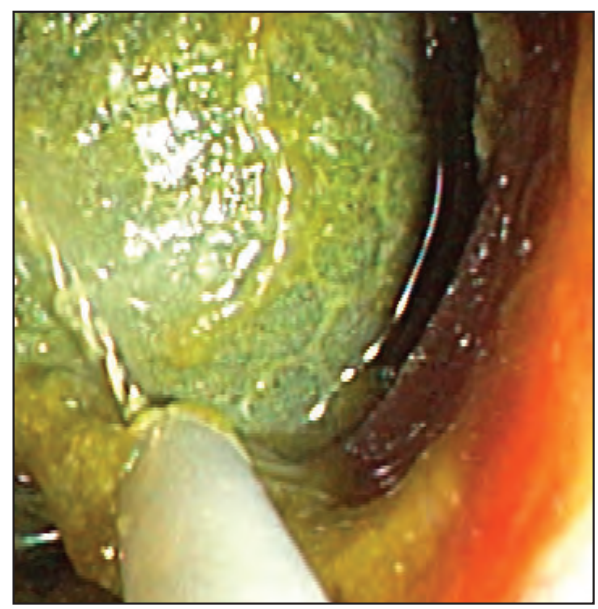

Figure 2. Endoscopic extraction of foreign body by means of polypectomy snare.

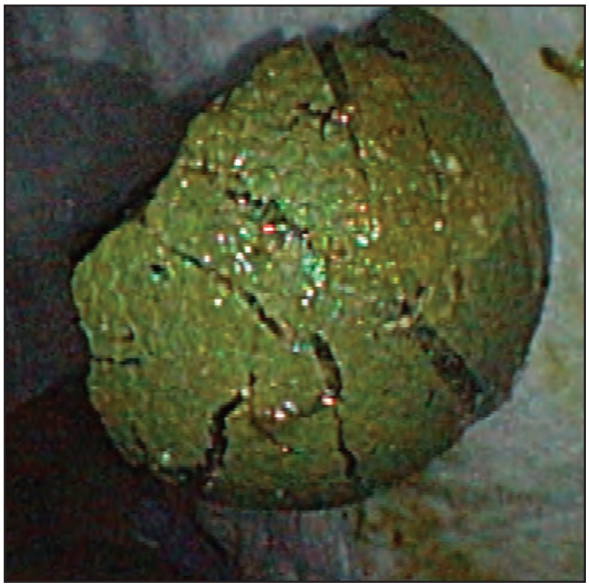

Figure 3. Image of foreign body which in this case is a piece of a foam-rubber ball.

capped, denture wearers, the visually handicapped or persons who ingest cold drinks or food too quickly. Voluntary ingestion happens with people with suicidal behaviour seeking self-harm, prison inmates, psychiatric patients and drug smugglers ("mules")[4-6].

According to the guidelines for handling ingested foreign bodies published by the American Society for Gastrointestinal Endoscopy, these can be divided into the following groups: a) alimentary bolus, usually meat; b) blunt objects, such as coins; c) long objects, over 6-10 cm. long, such as toothpicks; sharp objects, such as small bones or fish bones; e) batteries and f) drugs, either covered in plastic or wrapped in latex[7]. The objects may also be sharp-pointed (causing bowel perforation) or blunt and rounded (such as the case in question) which can lead to a bowel obstruction[8].

With regard to clinical signs, it is worth mentioning that immediate passage of the foreign body can initially cause coughing, retrosternal pain or even dyspnoea, which then rebates once the object has reached the stomach. The case we present began with non-specific symptoms which were easily mistaken for gastroenteritis, given that the patient at no time mentioned the ingestion of any foreign body whatsoever. Moreover, the anamnesis did not show any psychiatric disturbance which might lead us to suspect anything. In fact, the symptomatology of this case proves that bowel occlusion can appear months after the ingestion.

As for the diagnostic tests, a simple radiographical study can be sufficient, although in the event of a negative result coupled with a high degree of suspicion of a radiolucid object, a barium study can be considered as a diagnostic tool. In cases in which the radiographical study proves negative, a panendospcopic study is in order, be it a colonoscopy or an endoscopy, depending on the clinical symptoms[9]. In our case, given that the symptoms indicated a lower occlusion, a colonoscopy was performed following a radiological study which included an abdominal CT scan. This procedure acted both as a diagnostic tool (highlighting the cause of the symptoms and even the presence of ulcerated lesions in the mucosa), and an extraction tool, enabling the full resolution of the situation with no added complications[10].

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