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FOREIGN BODY INGESTION PRESENTATIONS IN CHILDREN

ÇOCUKLARDA YABANCI CİSİM YUTULMASI PREZENTASYONLARI

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ABSTRACT

Aim: Foreign body ingestion is one of the most common reasons for admission to pediatric emergency departments. It is one of the important admission complaints that should be questioned in the history and kept in mind regarding the need for urgent intervention in pediatric emergency service admissions and, in some cases, the difficulties in diagnosis. We wanted to examine the presentation patterns and complications of our patients who presented with foreign body ingestion, to examine an issue that is important for the emergency services, and to emphasize the necessity of questioning foreign body ingestion if the cause of the complaint cannot be found in some disease groups.

Material and Method: Our study was carried out by retrospective examination of the files of the patients evaluated in a Pediatric Gastroenterology and Pediatric Surgery Outpatient Clinic, and recording the complaints, presence of complications, foreign body localization and what the removed bodies were.

Results: Twenty-five patients with suspected foreign body ingestion and detected foreign body were included in the study. 40% of the patients were girls, 60% were boys, and the mean age was 4.5 years. The most common presentation was 44% asymptomatic. At the time of admission, 16% of the patients were complicated by perforation. Foreign bodies were removed endoscopically in 44% and surgically in 20%. The most extracted object was coin (20%). The most common location was the gastric antrum in 52%.

Conclusion: Foreign bodies requiring intervention are most frequently removed endoscopically, and the rate of patients requiring surgical intervention is low. It should not be forgotten that a significant part of the patients are asymptomatic, and in some patient groups, especially in patients with autism and in very young age groups, foreign body ingestion should be asked, even if there are no symptoms.

Keywords: Complications, Foreign Body Ingestion, Presentation in Children.

ÖZET

Amaç: Yabancı cisim yutulması çocuk acil servislerine en sık başvuru nedenlerinden biridir. Çocuk acil servis başvurularında acil müdahale gerekliliği ve bazı durumlarda tanı koymadaki güçlükler açısından öyküde sorgulanması ve akılda tutulması gereken önemli başvuru şikayetlerinden biridir. Yabancı cisim yutulması ile başvuran hastalarımızın başvuru şekilleri ve komplikasyonları incelemek istedik. Yabancı cisim yutulmasının nedeni bulunamamış akut batın tablosunda da şikayetlerde belirtilmemiş olsa da sorgulanması gerketiğini vurgulamak istedik.

Gereç ve Yöntem: Çalışmamız Çocuk Gastroenteroloji ve Çocuk Cerrahisi Polikliniği'nde değerlendirilen hastaların dosyalarının retrospektif olarak incelenmesi ve şikayetleri, komplikasyon varlığı, yabancı cisim kaydı ile yapıldı.

Bulgular: Çalışmaya yabancı cisim yutulduğundan şüphelenilen ve yabancı cisim tespit edilen 25 hasta dahil edildi. Hastaların %40'ı kız, %60'ı erkek ve ortalama yaş 4,5 idi. En sık başvuru %44 asemptomatikti. Başvuru sırasında hastaların %16'sında perforasyon komplike idi. Yabancı cisimlerin %44'ü endoskopik, %20'si cerrahi olarak çıkarıldı. En çok cisim bozuk paraydı (%20). En sık yerleşim yeri %52 ile mide antrumudur.

Sonuç: Müdahale gereken yabancı cisimler genel olarak endoskopik olarak çıkarılmakta ve cerrahi müdahale gereken hasta çok daha az sayıdadır. Hastaların büyük bir kısmının asemptomatik olduğu unutulmamalıdır. Bazı özel hasta gruplarında, otizim ve küçük yaş çocuklarda, yabancı cisim yutulması şikayet olmasa da sorgulanmalıdır.

Anahtar kelimeler: Çocuklarda Başvuru, Komplikasyonlar, Yabancı Cisim Yutulması.

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INTRODUCTION

Foreign body ingestion is one of the most common reasons for admission to pediatric emergency departments. Although foreign bodies can progress spontaneously from the gastrointestinal tract in 80-90% of cases, 10-20% require endoscopic intervention, and only 1% require surgical intervention (1). It is one of the important admission complaints that should be questioned in the history and kept in mind regarding the need for urgent intervention in pediatric emergency service admissions and, in some cases, the difficulties in diagnosis (2). In developed countries such as the USA, the number of patients reported with foreign body ingestion was as high as 120000 per year (3), and this clinical condition causes 1500 deaths per year in the USA (4). Some patients may remain asymptomatic for years, and the diagnosis can be made when complications such as perforation develop (2). We wanted to examine the presentation patterns and complications of our patients who presented with foreign body ingestion, to examine an issue that is important for the emergency services, and to emphasize the necessity of questioning foreign body ingestion in detail in the anamnesis if the cause of the complaint cannot be found in some disease groups.

MATERIALS AND METHODS

Our study was carried out with the retrospective analysis of patients who applied to Pediatric Gastroenterology and Pediatric Surgery Outpatient Clinic. Approval for the study was obtained from our Hospital Ethics Committee (Ethic Approvel Number: 1995, Date: 23.06.2022). Admission complaints, complications, foreign body localization, how the foreign body came out, and what the foreign body was were recorded from the patients' files. The study is written in accordance with the Helsinki Declaration.

RESULTS

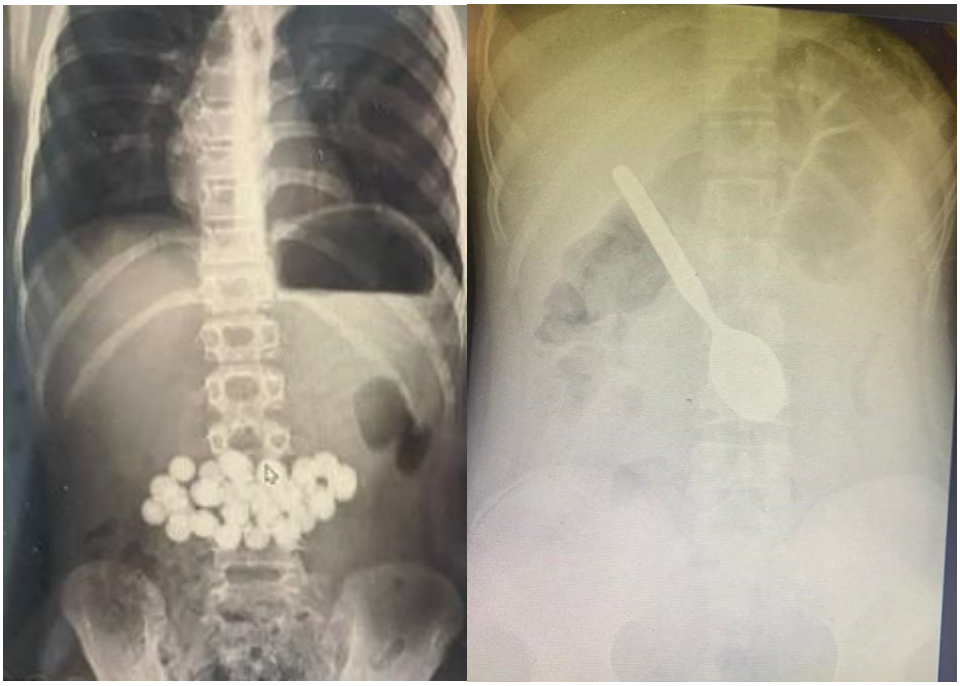
Twenty-five patients with suspected foreign body ingestion and detected foreign body were included in the study. 40% (10 patients) of the patients included in the study were female, and 60% (15 patients) were male. The mean age of the patients was 4.5 years. When evaluated according to the presentation patterns, 44% (11 patients) were asymptomatic most, while 28% (7 patients) had difficulty in swallowing in the second frequency and vomiting in the third frequency in 16% (4 patients). 8% (2 patients) of the patients presented with the clinic of acute abdomen. The least complaint at presentation was cough in 4% (1 patient). At the time of admission, 16% (4 patients) had perforation as a complication, and 84% (21 patients) had no complications. The ages of 3 of the patients who applied with complications were under 3 years (12 months, 22 months, and 36 months, respectively. Complications were present in patients at a young age; ingestion of foreign bodies was not noticed, and they could not express themselves. In one of these patients, a neodymium magnet was detected incidentally (Picture 1) in the Abdominal X-ray performed because of abdominal tenderness and fever. Since it is a trendy toy, especially among children today, a magnet should be considered in the differential diagnosis of acute abdomen due to its risk.

Picture 1. The Appearance of a Neodymium Magnet Localized in the Gastric Antrum.

Due to neodymium magnets and multiple magnets, perforation rates are high (5,6,7). Duodenogastric fistula and perforation were detected due to neodymium magnets (Picture 2).

Picture 2. Complication due to Neodymium Magnet and Fistula Development between Stomach and Colon.

The time elapsed after foreign body ingestion was 1 day in 28% of the patients. In terms of foreign body ingestion awareness, one patient applied after 120 days at most. In some patient groups, especially autistic patients, the rate of swallowing different objects (such as spoons and aquarium stones) is much higher (Picture 3).



Picture 3. Different Foreign Bodies Are Encountered in Autistic Patients. On the left is the aquarium stones in the stomach, and on the right is a teaspoon.

In our patient group, unlike this, foreign bodies were removed by endoscopic gastroscopy in 44% (11 patients), they were removed spontaneously without gastroscopic procedure in 36% (9 patients), and surgical intervention was required in 20% (5 patients). The most ingested foreign body was coin at the rate of 20% (5 patients). The second frequency was latch hook and nail at a rate of 12%. Foreign bodies were most frequently localized in the stomach in 52% (13 patients). In the second frequency, it was localized in the esophagus in 32% (8 patients). When the patients' length of stay was evaluated, 48% (12 patients) were discharged on the same day.

DISCUSSION

In our study, the most frequent admission of our patients was asymptomatic at a rate of 44%, while in the literature (8), asymptomatic admission rates were 18.8%. Many studies have shown that what is swallowed, size, and length of stay affect the risk of complications (9). While the complication rate of our patients is 16% at the time of admission, the complication rate rises to 20% when more extensive patient series are examined (10). It is very important that the mean age of the patients presented with perforation is below 3 years old and that they cannot express that they have swallowed a foreign body. Therefore, the importance of radiology (11) should be remembered in patients with an undiagnosed acute abdomen, their complaints do not go away, and foreign body ingestion should always be kept in mind when interpreting images especially in pediatric patients (12).

Foreign body ingestion should also be considered in the differential diagnosis, especially in patients with acute abdomen in the pediatric age group and psychiatric patients (13). Among the patients, we had a patient whose diagnosis was made 120 days after ingestion of a foreign body. In cases where foreign body ingestion cannot be told by the patient in the pediatric patient group, the diagnosis period can be very long. In the literature, there are pediatric case reports diagnosed with symptoms 9 months after foreign body ingestion (14). It should be kept in mind that this period may be more extended, especially in autistic patients and patients who are too young to say they swallowed, thus affecting the complication rate.

When the procedures performed on our patients are evaluated, the body is frequently removed by endoscopic gastroscopy, and the number of surgical interventions is low (15). Especially since the most frequently swallowed foreign body is coin and there are preparation stages for gastroscopy, objects came out spontaneously at a rate of 36%, and no intervention was required.

CONCLUSION

Foreign bodies requiring intervention are most frequently removed endoscopically, and the rate of patients requiring surgical intervention is low. It should not be forgotten that a significant part of the patients are asymptomatic, and in some patient groups, especially in patients with autism and in very young age groups, foreign body ingestion should be asked about in detail in the anamnesis, even if there are no symptoms.

Author Contributions

Plan, design: DGT, ZÖ, IBC; Material, methods and data collection: DGT, ZÖ, CE, Data analysis and comments: CE, IBC; Writing and corrections: DGT, İBC

Conflict of interest

The authors declare that they have no conflict of interest

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