CASE REPORT

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Colonic Perforation in a Young Tetraplegic Male Caused by Zucchini

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ABSTRACT

Introduction: Colonic perforation is a clinical condition which occurs due to variety of reasons, such as intrinsic disorders of the intestine, extrinsic causes, but also due to presence of foreign bodies. Foreign objects enter gastrointestinal tract by oral or transanal introduction. **Case report:** we present an uncommon case of a 26- year-old tetraplegic male, whose death was a consequence of a widespread purulent peritonitis provoked by colonic perforation inflicted by an unusual foreign body, transanally introduced 28 centimeters long zucchini (*Cucurbita pepo* L.). **Conclusions:** we share our experience in order to emphasize the importance of consideration and early recognition of foreign body presence in the alimentary tract as possible diagnosis.

Key words: colonic perforation, transanal, Zucchini.

1. INTRODUCTION

Foreign bodies discovered in gastrointestinal system are considered to be quite common occurrence (1). Variety of reasons explaining their presence in alimentary tract have been mentioned in the literature. Some of those are: concealment, attention seeking behavior, accidental introduction, anal autoeroticism, sexual assault, diagnostic or therapeutic procedures (2, 3). Most foreign objects pass uninterrupted through alimentary system, still cases of bowel perforation and acute abdomen requiring surgical treatment occur (1, 4). Our paper demonstrates an unusual case of lethal colonic perforation caused by anally self-inserted foreign body, in this case Zucchini (*Cucurbita pepo* L.). To our knowledge, no cases including this foreign body has so far been described.

Case report

Emergency team arrived to a 26-year-old patients house after the call was referred to emergency department by his family. The team found visibly prostrated male suffering excruciating abdominal pain accompanied by high fever. The patient

suffered cardiopulmonary arrest few minutes after teams arrival, still resuscitation measurements were unsuccessful. Heteroanamnestic data obtained from patients parents revealed that the deceased complained of high fever, excessive thirst and abdominal pain for the past two days. According to these data, sepsis was considered a possible cause of lethal outcome. Patients medical history consisted of tetraplegia as sequelae of traffic accident 5 years premortem since the deceased suffered cervical spine injuries (bilateral fracture of C6 articular processes and left part of C7 lamina), contusion of the spinal medulla, left frontotemporal subdural hematoma and right coxofemoral joint dislocation. After surgical treatment of these injuries, young male was referred to rehabilitation, which resulted in neurological improvement. Finally, he was able to move both arms and perform active movements with his right leg, without any active movements of the left leg. No psychiatric illnesses or disorders were detected in his medical history. According to unclear circumstances of his death, the deceased was transported to our

Figure 1. Extracted 28 cm long Zucchini from colon

Figure 2. Rupture of intestinal wall caused by Zucchini

department where the autopsy was performed. Post-mortem examination revealed distended abdominal wall above the chest level. Abdominal cavity was fulfilled with thick, blurry yellow content, yet peritoneal surface was rough with yellowish deposits. Through the upper abdomen protruded transversely placed 28 centimeters long Zucchini covered by intestine (Figure 1). The wall of small and large intestine was rough and thick with yellowish content in the intestinal lumen. Besides those findings, rupture of the intestinal wall 8 centimeters in length placed 15 centimeters proximally to the anus was noticed (Figure 2). Pathohistological examination confirmed diffuse purulent peritonitis as the cause of death. Toxicological analysis demonstrated no abnormalities. To conclude, forensic investigation excluded criminal assault as possible cause of young male mortal incident.

2. DISCUSSION

Perforation of the colon can be explained by any number of causes, most often carcinoma, inflammatory bowel disease, iatrogenic perforation, penetrating or blunt abdominal trauma, but also by foreign bodies in alimentary tract (5, 6, 7). The risk of undesired consequences such as perforation is in positive correlation with length and sharpness of the object (1). Other possible complications include peritonitis, intestinal obstruction, hemorrhage, abscess formation (1, 4, 8). Greater risk exists in older patients, those wearing dentures, orthodontic appliances, patients with bowel pathology, psychiatric patients (1, 9). In case of our patient, autopsy demonstrated widespread purulent peritonitis as the cause of death. As mentioned, the process initiated with the presence of a foreign ob-

ject in gastrointestinal tract, in this case Zucchini, which provoked mechanical obstruction of the bowel, causing inflammatory response in the intestine wall and increasing intraluminal hydrostatic pressure, therefore making the bowel vulnerable and susceptible to disruption. Since this foreign object was rather round than sharp-edged, we consider inflammatory reaction and high intraluminal pressure more probable causes of bowel laceration than morphologic characteristics of zucchini. The leakage of the intestinal content into the abdominal cavity lead to diffuse inflammation of the peritoneum with systemic inflammatory response leading to shock with lethal outcome. Since the young man gave no information to anyone about the transanal introduction of a foreign body in his bowel, no medical interventions were performed, therefore leading to fatal ending. According to data referring to functional mobility of his both arms and findings of forensic investigation, foreign object was most probably introduced by the deceased himself with the intention of enhancing sexual stimulation or possible suicidal intentions. Since the diagnoses of injuries inflicted by foreign objects in gastrointestinal tract, especially those anally introduced, are in many cases delayed because of patients denial of the situation in order to prevent embarrassment and unpleasantness (2,10), we believe the same reasons influenced this young man and led to untoward outcome. Some of the symptoms that patients with colorectal foreign bodies complain about are: abdominal pain, rectal pain, bleeding, constipation (10). In the process of diagnosis establishment important are: anamnestic data with high degree of suspicion of signs of toxicity suggesting perforation, physical examination of the abdomen and rectal examination with focus on possible injuries, laboratory examination, x-ray of the abdomen and pelvis as well as CT- scan (10, 11). The management depends on the presence of perforation and patients condition. In those who are clinically stable without peritonitis or perforation, objects can be removed transanally or transabdominally (endoscopic intervention). Exploratory laparotomy is necessary when signs or symptoms of perforation, sepsis or peritonitis are present (10). After colorectal foreign body removal, observation of the patient, endoscopy and x-ray is needed to detect any perforation but also postextraction sphincter dysfunction (10, 11).

3. CONCLUSION

Although sometimes difficult, early and correct diagnosis of foreign objects in the alimentary tract is crucial for prevention and treating the possible complications in order to prevent possible lethal outcome.

• Conflict of interest: none declared.

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