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An inadvertent ingestion of lollipop stick causing rectal perforation: A rare case report

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Abstract
Accidental ingestion of foreign body is common in children, mentally challenged people, alcoholics and elderly population with dentures. A major proportion of these individuals does not present with any complication. Around 20% present with complications due to non-passage of foreign body through the gastrointestinal tract. 11 years old child presented with acute abdomen with history of ingestion of lollipop stick that lead to rectal perforation. Our case is special in a view that few cases are reported till date which lead to perforation of rectum just at the level of peritoneal fold of vesico-rectal pouch due to accidental ingestion of stick like structure. Moreover no case was found in review of the literature in which perforation is caused by lollipop stick.

Keywords: lollipop, rectal, perforation

Introduction

Accidental ingestion of foreign body is common in children, mentally challenged people, alcoholics and elderly population with dentures. A major proportion of these individuals does not present with any complication [1]. Many of these foreign bodies does not cause any difficulty while entering into the stomach and goes off readily through the remaining gastrointestinal tract. 80% of these objects does not cause any complication while passing through the entire gastrointestinal tract [2]. Around 20% present with complications due to non-passage of foreign body through the gastrointestinal tract [3]. Complications such as intestinal obstruction, viscus perforation, hemorrhage and formation of fistula can occur if these foreign bodies does not pass off. Sharp objects are the main cause of perforation from mouth to anus [4, 5]. Chicken and fish bones constitutes around half of the published perforations from sharp objects. Ileo-ceacal junction and sigmoid colon are the commonest site of perforation [2].

Rectal foreign bodies are common finding around the world. Lower incidence is found in Asia than Eastern Europe and men are more prone than women worldwide. This can occur in any age group but high probability is in younger population. Anal insertion of these objects is the most common mode. Rarely foreign body may be ingested which may pass through the gastrointestinal tract but is with held in rectum. These foreign bodies in rectum may vary from vibrators, dildoes, bottles, light bulbs, fruits, nails, vegetables, coins, packaged drugs, etc [6, 7]. Foreign bodies in adjacent tissues/organs can also perforate the rectal wall and enter the rectal lumen.

Case Report

An 11 years old child presented in Out-patient department of paediatrics at Dr. Yashwant Singh Parmar Government Medical College & Hospital, Nahan (Himachal Pradesh) with chief complaints of pain lower abdomen for 3 days with vomiting for last 1 day. He denied symptoms of constipation, anal pain, bleeding per rectum. On general physical examination, pulse rate 98/min; blood pressure = 100/70 mmHg & respiratory rate = 20/min. His father gave history that the child had accidentally ingested a lollipop stick while eating the lollipop 10 days back. Abdomen was tense and tender along with rebound tenderness especially below umbilicus. X-ray abdomen standing was to rule out peritonitis, which revealed Air under both domes of diaphragm. However no foreign body was detected on X-ray being plastic in nature. Patient was referred to surgery department and was admitted in male surgery ward for further management where intravenous line was secured and primary treatment based on acute generalized peritonitis was given. Ultrasound of the child was done to know the site of injury and to look for any free peritoneal foreign body in the peritoneal cavity. But not very useful as it revealed about the minimal inter loop fluid only. CT could not be done due to unavailability in the medical college and in near vicinity. A decision of exploratory laparotomy under general anesthesia was taken after obtaining written and informed consent from patient and the attendants. Laparotomy was done which revealed purulent interloop fluid with omentum and ileum stacked in the rectovesical pouch. On adhesiolysis, foreign body in the form of plastic stick ~5cm in length was partially projecting out from the mid-part of rectum just proximal to anterior peritoneal reflection. A perforation of size ~1x1 cms was present on the anterior rectal wall of the rectum near rectovesical pouch from where the partially embedded stick was removed. Contamination along with pus pockets were also present in the pelvic cavity. After debridement of rectal wall at perforation site primary closure with absorbable suture

material in interrupted fashion with de-functioning sigmoid colostomy was done. Post- operative period was uneventful and stoma started functioning on 1st post-operative day itself and patient was discharged on 8th day of surgery after removing laparotomy sutures with planning to close the stoma after 3 months.

Discussion

Rectal foreign bodies are common finding around the world. Sexual gratification is the main source for voluntarily insertion of the foreign bodies per anally. Foreign bodies in rectum may vary from vibrators, dildoes, bottles, light bulbs, fruits, nails, vegetables, coins, packaged drugs, etc [6, 7]. Involuntarily foreign bodies are inserted in cases of rape and sexual assault. Drug traffickers use body pack which is another common source of rectal foreign body. Involuntarily non-sexual foreign bodies are inserted in children and elderly people. Foreign bodies like erasers, bottle caps, animal bones, coins, or tiny plastic toys taken orally may pass the entire gastrointestinal tract but are withheld in rectum which is common in children, careless eaters, and persons with psychiatric illness. These individual complains of vague abdominal pain, rectal bleeding or painful defecation and at times constipation. [7, 9].Careful abdominal examination should be done to illicit signs of peritonitis or Trans abdominally palpating the ingested foreign body which can be palpated in either of the left or right lower quadrant. Rectal examination must be performed, but after X-ray abdomen to avoid accidental injury to surgeon's finger from sharp objects. Foreign body is palpable only up to distal rectum on digital rectal examination. Presence of bright red color is not always an ominous sign of foreign body in the rectum. Increased sphincter tone due to muscular spasm of foreign body in the rectum should also be carefully assessed on digital rectal examination. Sphincter injuries to both external and internal sphincters should be assessed thoroughly while examining [9].

Not much role of laboratory evaluation is there except for raised white blood cell count and acidosis in suspected perforation. Physical examination is more authentic to depict the extent of injury.

The initial step in such patients is to identify whether or not a perforation is present. If perforation is suspected in such patients, they may have hypotension, tachycardia, Severe pain in abdomen along with guarding and rigidity as well as fever. Immediate resuscitation with intravenous fluids and broad spectrum antibiotics along with anaerobic coverage should be started if there is free air under right dome of diaphragm or with signs of peritonitis indicating a perforation of the intraperitoneal portion of rectum. Nasogastric decompression with Ryle's tube and Foley's catheterization should be done along with basic routine blood sampling. A computed tomography scan is helpful in determining the rectal perforation in patients with stable vital signs and in whom perforation is suspected. For perforation peritonitis go for Exploratory laparotomy and proceed.

Conclusion

Rectal foreign bodies are difficult to diagnose and presents with varied management dilemma. Delayed presentation, type of objects used to cause the damage, and spectrum of injury patterns may range from minimal extraperitoneal mucosal injury to free intraperitoneal perforation, sepsis, and even death. Evaluation of these patients must be done in an orderly fashion, with appropriate examination, laboratory and radiographic evaluation.

Our case is special in a view that few cases are reported till date which lead to perforation of rectum just at the level of peritoneal fold of vesico-rectal pouch due to accidental ingestion of stick like structure. Moreover no case was found in review of the literature in which perforation is caused by lollipop stick.

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