Intestinal Evisceration and Gangrene: A Sinister Complication of Abdominal Wall Abscess

Sir,

An abscess is a walled-off collection of pus in a tissue. Very small abscesses can be managed by simple antibiotics, but incision and drainage has to be performed for large abscesses. If the abscess is left untreated or is inappropriately managed, complications can arise. Such complications range from minor ones to the life threatening. The reported complications include spontaneous rupture to the surface or adjacent natural cavities, extension to adjacent tissues, metastasis to distant tissues, septicemia, prolonged pyrexia, and so on.\(^1,2\) We report a case of untreated abdominal wall abscess, where the patient presented with evisceration and gangrene of the small intestine.

A 20-days-old female neonate presented in the nursery emergency department of our institution with visible intestinal loops at the anterior abdominal wall. There was no history of any previous operation. The mother told us that she had noticed a boil in the left upper quadrant of the abdomen 5 days back, which had been associated with fever, excessive crying, and reluctance to feed. The boil increased in size over the course of 3 days. The parents took the child to a “peer”, who gave them some holy water for drinking as a cure. A few hours before arrival in our institution the boil had ruptured spontaneously and a long loop of intestine eviscerated through it. There was no history of bleeding per rectum, bilious vomiting or abdominal distension, prior to this incidence.

We immediately covered the intestine with warm saline-soaked gauze with the aim of preventing dehydration, contamination, and dryness. Intravenous (IV) access was established. The patient was resuscitated with IV fluids, antibiotics, and temperature maintenance. On arrival her temperature was 97°F, the heart rate was 150/min, and respiratory rate was 45/min. On inspection, there was an approximately 1 ft long loop of small intestine with doubtful viability eviscerating from a wound in the left upper quadrant of the abdomen. The patient was shifted to the operation theater after the parents had been counseled about the danger of intestinal gangrene if immediate intervention was not pursued.

At operation, an attempt was made to reduce the intestine through the wound, from which it had been eviscerated, though not successful. An exploratory laparotomy was then performed. A right supraumbilical transverse incision was made and the eviscerated intestine was reduced back into the peritoneal cavity. About 20 cm of ileum was gangrenous. There were no signs of any necrotizing enterocolitis (NEC) on inspection of intestine. The gangrenous portion of small bowel resected and an ileostomy was made. The total operative time was 20 minutes. The patient had an uneventful recovery and dated for stoma reversal.

Abscesses can be formed as a result of infections in the body. The etiology can vary widely. Abscesses can be the sequel of local infection or they may occur in immunodeficient states, which provide opportunities to various organisms for abscess formation. Important causes include primary local tissue infection, seeding from infection of some other organ, iatrogenic (e.g., due to the use of unsterilized syringes), immunodeficient states, infection of a posttraumatic hematoma, and so on.\(^3\) In our case, the abscess had started as a small boil in the left upper quadrant of the abdomen.

Pus can collect anywhere in the body. When it collects in natural cavities it is called empyema; for example, pus in the pleural cavity is called empyema thoracis. When the pus collects in tissues, the inflammatory response of the body tends to wall it off in order to prevent its spread. Abscess can be found in the skin, abdomen, liver, spleen, brain, spinal cord, bones, joints, and so on.\(^3\) In our case, the abscess was in the anterior abdominal wall.

The management options for abscesses include incision and drainage for established and walled-off abscesses; aspiration with a wide-bore needle, with or without ultrasound/CT guidance (depending upon the site, i.e., liver abscess); and conservative management with antibiotics. In the past, and in some parts of world even today, some solutions were applied over the abscess to facilitate its spontaneous bursting at the surface.\(^3–6\)

If left untreated abscesses may rupture spontaneously either at the surface or into a body cavity. In our case, the abscess had started as a boil in the skin of the abdomen; it then spread to involve the deeper layers of the abdominal wall to such an extent that there was ultimately a defect through which a loop of intestine eviscerated. After evisceration, the pressure over the mesentery caused strangulation of the intestinal loop. This seems to be the most plausible explanation for the findings in our patient. Our initial
diagnosis on arrival was NEC related leak of intestine that eventually ruptured out the anterior abdominal wall with evisceration of small bowel, however, this theory is refuted in absence of any history of prematurity, bleeding per rectum, abdominal distension and operative findings not suggestive of NEC. To the best of our knowledge such a complication of an untreated anterior abdominal wall abscess has not been reported before.

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