Case Report

A Rare Entity Adult Necrotising Enterocolitis

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Abstract: We report a case of Adult Necrotising Enterocolitis in an adult female who was diagnosed with intestinal obstruction. However on exploratory laparotomy no mechanical cause was found and major part of small bowel, caecum and proximal ascending colon was gangrenous alongwith intervening normal parts. Resection of affected bowel was performed followed by jejunostomy and transverse colostomy. However despite of the best efforts patient could not survive in the postoperative period. Case- A 45-year-old female, presented with acute abdominal pain, vomiting and abdominal distension of one day duration and clinical features suggestive of intestinal obstruction and hypovolemic shock. During exploratory laparotomy, foul smelling dark coloured fluid was found along with gangrene of large part of small intestine, cecum and the proximal part of the ascending colonwith intervening normal gut. A right hemicolectomy with resection of major part of small bowel was performed leaving approximately one feet of proximal jejunum Conclusion- Adult Necrotising Enterocolitis may mimic intestinal obstruction clinically or radiologically and prompt medical and surgical intervention is indicated in doubtful cases although it carries a poor prognosis.

Keywords : Adult Necrotizing Enterocolitis , Non Occlusive Mesenteric Ischemia , Gangrenous Bowel

Introduction

Adult necrotizing enterocolitis (ANEC) and non occlusive mesenteric ischemia (NOMI) are rare causes of acute abdomen [1,2]. Necrotising enterocolitis usually affects children and only few cases have been described in adults. Accurate preoperative diagnosis is often difficult in these cases. It is characterized by diffuse ulceration and necrosis of the distal small bowel and the colon. The surgical options in advanced cases in both these diseases are minimal and prognosis is poor. We report one such case of necrotising enterocolitis in an adult female with a fatal outcome even after surgery.

Case report

A 45-year-old female, presented with acute abdominal pain, vomiting and abdominal distension of one day duration and clinical features suggestive of intestinal obstruction and hypovolemic shock. Four days prior to her current presentation she passed dark loose stools. Her past medical history was significant for paraumblical hernioplasty two years ago. At the time of admission, pulse was 130 beats/min., blood pressure was 86/50 mmHg, and respiratory rate was 36/min with cold extremities. Total leucocyte count was 39,0000/cu mm and creatinine 2.39 mg%.

A plain erect abdominal radiograph revealed multiple air-fluid levels, thereby suggesting strangulation following obstruction of the intestines most likely due to adhesions from her previous surgery. She was taken to operation theatre for surgical treatment of her intestinal obstruction. During exploratory laparotomy, foul smelling dark coloured fluid was found along with gangrene of large part of small intestine, cecum and the proximal part of the ascending colonwith intervening normal gut.[Figure1].

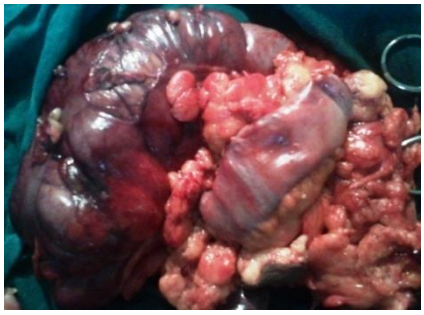

Figure 1- Intraoperative picture showing gangrene of major part of small bowel and caecum.

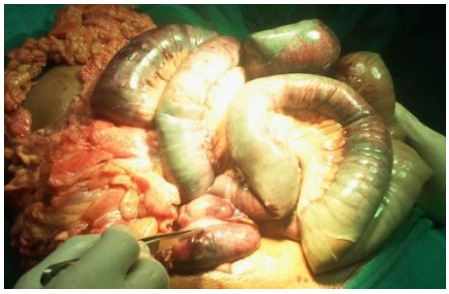

Figure 2- Specimen of Right Hemicolectomy showing gangrenous caecum and proximal ascending colon.

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There was no evidence of adhesions or any other evidence of mechanical obstruction. A right hemicolectomy with resection of major part of small bowel was performed leaving approximately one feet of proximal jejunum [Figure 2].

The jejunum was brought out as jejunostomy and the proximal end of the transverse colon was brought out as colostomy through the same opening. Unfortunately patient could not survive in the postoperative period. Histopathological examination revealed a non-specific picture of infarction necrosis of the bowel wall.

Discussion

The exact cause of ANEC is not known. Various theories include infection with certain bacteria and viruses, inflammatory mediators, circulatory disturbances leading to hypoxic injury with release of oxygen free radicals and loss of the bowel's cellular integrity. This mechanism is similar to bowel necrosis occurring in non occlusive mesenteric ischemia (NOMI)[3-5]. Here mesenteric vasoconstriction leads to gut hypoperfusion and intestinal necrosis, with bacterial translocation as the secondary event. However the primary etiology of ANEC seems to be different from neonatal necrotizing enterocolitis (NNEC). In children due to poorly developed defence systems, an initial infective insult seems to be the cause of intestinal necrosis than the primary vascular cause as seen in ANEC or NOMI[6]. Radiological and laboratory data are seldom helpful in diagnosing this entity. Findings on X-ray of these patients may show dilated bowel loops with multiple air-fluid levels are non specific. The common findings in ANEC at laparotomy include dilated and thickened loops of bowel with segments of necrosis often separated by segments of normal bowel (skip lesions) which are usually absent in NOMI[7,8]. Histological examination is characterized by pathological features such as an intestinal necrosis beginning in the mucosa, without obstruction of the mesenteric vessels. Management is both medical and surgical. Medical management attempts at producing local vasodilatation whenever possible and surgical resection of the affected intestinal segment. In many cases the diagnosis is made at exploratory laparotomy. However, in advanced cases surgical options are limited[9]. Late complications include short bowel syndrome and malnutrition in case the patients survive after surgical resection.

Conclusion

There is strong co-relation between the vascular and infective events occurring in the mechanism of massive bowel necrosis in ANEC. The clinical and radiological findings, laboratory investigations, histopathology features might be non-specific in advanced disease. A high index of suspicion is necessary in making a diagnosis although it carries a very poor prognosis.

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