AN UNUSUAL CAUSE OF RECURRENT SCROTAL SWELLING

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ABSTRACT

We present a case of recurrent acute painless swelling of the scrotum in an immunosuppressed child. The case illustrates that damage to the bowel following chemotherapy can, rarely, result in perforation and tracking of gas to the perineum and scrotum.

Keywords: Scrotal air, GALT, gut perforation.

INTRODUCTION

We present a case of recurrent acute painless swelling of the scrotum in an immunosuppressed child. The case illustrates that damage to the bowel following chemotherapy can, rarely, result in perforation and tracking of gas to the perineum and scrotum.

CLINICAL REPORT

A 10 yr old boy with known lymphoma presented with an acute onset of painless bilateral scrotal swelling. There was no fever, trauma, vomiting, abdominal distension, constipation or bleeding. He had opened his bowels and passed urine normally for several weeks. The non-Hodgkin lymphoma had been diagnosed 7 yrs previously following the finding of a mediastinal mass. Initial chemotherapy was completed 5 yrs ago but the condition relapsed and the patient underwent an unrelated donor bone marrow transplant a year ago. He developed severe skin graft versus host reactions and was immunosuppressed at the time of presentation.

On examination he was comfortable and the vital observations were normal. The abdomen was soft and non tender with good bowel sounds; no organomegaly or tenderness was identified. The scrotum was balloon-like and swollen, tense, reddened, non-tender and transilluminated. The penis was buried inside the scrotum and the testicles were difficult to palpate. Clinically
there was gas palpable over the lower sacral area in the natal cleft. There was no swelling in the inguinal region. There were no bowel sounds heard on the scrotal swelling. The skin was intact with no signs of gangrene. Ultrasound suggested air in the scrotum and a CT of the abdomen showed extensive pneumatosis extending from the sigmoid colon to perineum, involving the scrotum and perianal area.

In view of extensive pneumatosis he was treated with broad spectrum antibiotics, probiotics and long term TPN. The swelling reduced after a week, and at three weeks he was slowly commenced on enteral feeds which he tolerated. However four weeks later (8 weeks after his original presentation) he developed a similar scrotal swelling. Intravenous feeding was recommenced; he tolerated it well and recovered on this conservative management. The patient did not have signs of intestinal perforation and did not need surgical intervention during his admissions; no nutritional cause of perforation or its recurrence was identified.

DISCUSSION

Pneumatosis intestinalis is defined as gas in the bowel wall and is a radiographic finding and not a diagnosis. Its aetiology varies from benign conditions to fulminant gastrointestinal disease. Pneumatosis intestinalis demonstrates a spectrum of presentation, with associated pneumoperitonium identified in about 4% of patients. In most patients gas is limited to an area of bowel: in some it can track up to the duodenum then porta hepatis, in others downwards onto the perineum.

Immunosuppressed paediatric patients may manifest this problem because of depletion of Peyer’s patches, resulting in loss of bowel wall integrity. This can result in the dissection of bowel gas into the bowel wall. (1-3). Factors identified as contributing to the development of pneumatosis intestinalis include pre-transplantation chemotherapy and radiotherapy, steroid therapy, infectious colitis, GVHD and septic shock (4). Non necrotic causes of pneumatosis intestinalis include inflammatory bowel disease, celiac disease, gastrointestinal allergy and also post endoscopy due to mucosal injury. Necrotic aetiologies include necrotising enterocolitis (more commonly encountered in the premature), ischemia due thrombo-embolism and more infective cases are documented including clostridium difficile and rotavirus (6). If patients are asymptomatic it is unlikely there is significant underlying necrosis - surgical intervention is not warranted in these and (5). Our case suggests that conservative approaches need to be employed and should be removed slowly in order to prevent recurrence of the perforation.

Although usually asymptomatic, the presenting features of the condition may include abdominal pain, distension, diarrhoea, rectal bleed, or asymptomatic (4-6). Features of pneumatosis intestinalis on radiographs include bubbly and linear intraluminal lucency that represent submucosal and subserosal gas respectively. The right side of the colon is more frequently
involved. Most cases can be managed conservatively but regular surgical assessment is recommended (5). Poor prognosis is suggested if there is pneumoperitonium with intestinal obstruction or presence of portal gas and neutropenic colitis. There is only one other reported case of air in the scrotal sac so that this cannot be reliably used as an indicator of prognosis (7).

CONCLUSION

We report a rare presentation of pneumatosis intestinalis with recurrent scrotal pneumatosis, a complication of GVHD after bone marrow transplant.

Declaration: The authors have no conflicts of interest to disclose. A frame of the CT scan of this case has been published elsewhere (see reference 8)

REFERENCES

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