Case Report

Unusual presentation of a deep pelvic abscess in a young girl

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ABSTRACT

Although the clinical features of appendicitis in children are well established, diagnosis can be compounded when a young girl having just had menarche presents with unusual and untoward symptoms. The gynecological and surgical diagnoses and subsequent findings will be discussed in detail, along with the respective management regimens. Pelvic abscesses in particular will be discussed relative to accessing problems.

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Appendicitis is the most common surgical emergency in childhood.[1] Although its clinical features are well established, the presentation in young children is often atypical, leading to a delay in diagnosis.[2] This is particularly true if the appendix has already ruptured or if the symptoms are atypical such as diarrhea, urinary retention or vague pelvic or abdominal pain. We describe in this report an atypical case of an appendiceal pelvic abscess in a young girl mainly because of its unusual presentation and also to discuss problems related to the diagnosis and management.

Case Report. An 11-year-old Bahraini girl was brought to Accident and Emergency with a history of sudden onset of lower abdominal pain associated with diarrhea and vomiting. The diarrhea was watery and not associated with blood or mucous. She had menarche 2 months previously and has so far had 2 menstrual periods. There was no history of similar episodes before. Initial examination showed a temperature of 38°C, blood pressure of 120/80 mm Hg, and pulse 137 beats/minute. She appeared pale and mildly dehydrated. There was no cyanosis, icterus, edema or clubbing of the fingers and no lymphadenopathy was detected. Further examination showed her to be a phenotypical female with normal secondary sex characteristics. Examination of the head and neck was normal. Examination of the respiratory and cardiovascular systems also revealed no abnormality. On abdominal examination, there was no guarding, rebound tenderness or masses. The liver, spleen and kidneys were not palpable. On pelvic inspection, there was slight bleeding per vagina. A pelvic ultrasound revealed free fluid in the pouch of Douglas extending to the left side of the pelvis and to be 9cm x 7cm in size. (**Figure 1**). The uterus and ovaries were normal. Laboratory investigations were as follows: hemoglobin 12.5g/dl, erythrocyte sedimentation rate 40, white blood cells: a total count of 22600 (neutrophils 87%, lymphocytes 5%, monocytes 8%), while urinalysis showed red blood cells+++. Provisional diagnoses including ruptured corpus luteum cyst, appendicitis or a leaking dermoid cyst were suggested. She was admitted to the gynecological ward for further management. Although she was prepared for diagnostic laparoscopy or laparotomy, the family refused to consent for surgery. A consultation was made to the pediatric surgeon who reviewed her condition and did a rectal examination. The examination revealed a boggy and tender rectal

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Figure 1 - Ultrasound revealing a deep pelvic collection extending to the left side of the pelvis.

swelling. He was of the view that this case was more likely to be a large pelvic abscess due to a perforated appendix. He recommended antibiotic coverage with cefuroxime (Zinacef) 750 mg 4 times daily, and metronidazole (Flagyl) 500 mg by intravenous drip. She was also scheduled for magnetic resonance imaging (MRI) and transferred to the pediatric surgical ward. A computerized tomography scan revealed a collection of fluid in the pouch of Douglas 9cm x 7.5cm (density value 14 Hainsfield Unit). Normal pelvic organs were seen, and the liver, spleen, kidneys and urinary bladder were also normal. Presence of a dermoid cyst was excluded. Arrangements were made for diagnostic laparoscopy, and exploration of the pelvic fluid collection. Preoperatively the prothrombin time and partial thromboplastin time and international normalized ratio were prolonged. In the operating theater proctoscopy was performed under general anesthesia and it was decided to perform drainage of the pelvic abscess using a wide bore needle. A foul smelling purulent discharge of approximately 385 cc was drained and lavage performed. Postoperatively, intra-muscular injections of gentamycin 30 mg 8 hourly were added to her antibiotic coverage and she was kept on intravenous fluids. On the 4th post-drainage day, her condition was good and rectal examination revealed no presence of a pelvic mass. Three months later, she reported to the outpatient clinic complaining of occasional abdominal pain and right iliac fossa tenderness. She was scheduled for laparoscopy and elective appendicectomy. The laparoscopic findings showed periappendicular adhesions. There was a long pelvic appendix with the tip adherent to the lateral side of the pelvis. The rest of the pelvic organs were normal. Appendicectomy was performed through a right iliac fossa incision. The patient became well and was discharged on the 5th postoperative day. Microscopically the appendix revealed an organizing mixed inflammation in the serosal aspect towards the tip. No granulomas were detected. These features were consistent with post-perforation of an appendiceal abscess.

Discussion. Presentation of ruptured appendicitis can be atypical, often resulting in a delayed diagnosis. Barium enema examination can be useful when clinical signs and symptoms are unusual such as severe and frequent diarrhea rather than the usual constipation or a few loose motions. Abdominal, transrectal sonography, color doppler and MRI can help to resolve doubtful cases. In a young menstruating female child, one must also consider gynecological problems.[3,4] Management poses access problems in cases of pelvic abscesses resulting from a ruptured appendix. Several modalities of treatment have been described during the last decade such as drainage of the abscess via the transgluteal, transvaginal or transrectal routes. There were also conflicts of opinion on draining pelvic abscesses as to whether one should use a catheter or the one-step single puncture method. A needle for aspiration followed by lavage was used in this case, and monitored guidance was carried out with transrectal sonography. We relied on prophylactic antibiotic coverage to control possible residual infection.[5-7] The follow-up laparotomy showed the pelvic organs to be normal with no adhesions suggesting that the retrocecal appendix found might have ruptured into the retroperitoneal space, which may also have contributed to the absence of classical symptoms of appendicitis and the presenting of diarrhea at the time of admission.

Pelvic abscesses pose a special therapeutic dilemma because of access difficulties. Percutaneous drainage is painful and the abscess may be occasionally inaccessible. Moreover, the urinary bladder and bowel may preclude an anterior approach, whereas the bony pelvis limits lateral access, posterior access or both. The single-step method of needle aspiration with lavage for draining deep pelvic abscesses is safe, simple, effective and associated with less discomfort to the patient.

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