PELVIC ABSCESS COMPLICATING ACUTE APPENDICITIS IN AN 18 YEAR OLD BOY

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ABSTRACT

Background: Pelvic abscess is an uncommon finding in males. It is also an uncommon complication of acute appendicitis. It is usually a complication of appendicectomy.

Method: An 18 year old boy was referred from a private clinic with history of right iliac fossa (RIF) pain, fever, nausea and constipation. The patient had been on oral antibiotics to suppress repeated episodes of right iliac fossa pain before referral for sonography. During ultrasound, a large pelvic abscess was seen lying posterior to the urinary bladder in the rectovesical space. At surgery, the diagnosis was confirmed and additionally a perforated appendix was discovered.

Result: Pelvic abscess was diagnosed by sonography and was confirmed at surgery as a complication of acute appendicitis.

Conclusion: Our report is to highlight the importance of ultrasound investigation in patients in whom appendicitis is suspected and especially in those who did not seek medical help early.

Keywords: Appendicitis, Abscess, Pelvic ultrasound

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INTRODUCTION

A pelvic abscess is an uncommon complication of acute appendicitis. The incidence is high in communities where there is undue delay in seeking medical aid. [1] It is more commonly a complication of appendicectomy from gangrenous or perforated appendix.[1] Pelvic abscess is about the commonest intraperitoneal abscess.[2] The location of abscess resulting from perforated or gangrenous appendix follows the anatomical location of the appendix. The commonest site of appendix abscess is in the lateral part of iliac fossa and second most common is in the pelvis.[3] In the male, the abscess is located between the bladder and the rectum and in the female, between the rectum, vagina and uterus.[2]

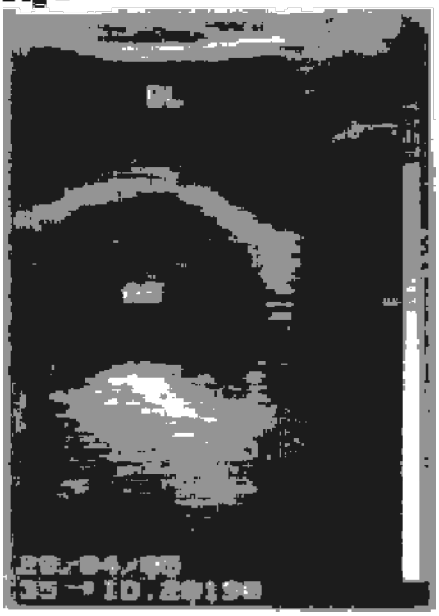
Appendicitis is diagnosable with ultrasound. The ultrasound features of appendicitis are non-compressible dilated appendix measuring over 7mm in diameter, hyperaemia on colour doppler imaging (CDI) and the complications of the disease such as gangrene- avascular area on CDI, phlegmon – echogenic mass and abscess, irregular hypoechoic mass.[4] Though quite easily diagnosed clinically some patient may be referred for ultrasound. Atypical cases of appendicitis are usually referred for ultrasound to rule out pelvic, renal or gall bladder pathology.[5]

REPORT

An 18 year old male referred from a private clinic with history of right iliac fossa (RIF) pain, fever, nausea and constipation. The patient had been on oral antibiotics to suppress repeated episodes of right iliac fossa (RIF) pain before referral for sonography. Patient was very ill but not pale, jaundiced or dehydrated. The blood pressure on presentation was 110/70mmHg. The lungs were clinically clear and cardiovascular system (CVS) normal. There was marked tenderness at the periumbilical region and hypogastrium which were grossly distended and had no bowel sounds. A clinical diagnosis of perforated appendix was made. The patient was admitted, placed on nil per oral and nasogastric (NG) tube inserted. Preoperative laboratory investigation results were 15.0g/dl haemoglobin (Hb) concentration, 45mm per hour erythrocyte sedimentation rate (ESR), 9.6 x 10^9 /L white blood cell (WBC) count. Malaria parasites (*Plasmodium Spp.*) were not seen and widal titres were not significant.

Abdominopelvic ultrasound was carried out using Siemens Sonoline LX machine with a 3.5MHz linear array probe. A thick – walled cystic mass lesion measuring 7.6cm x 5 .9cm with a wall thickness of 8mm was seen lying posterior to the urinary bladder; in the rectovesical space. The posterior aspect of the bladder was deformed by the pressure from the mass (See Fig. 1). The cystic mass demonstrated posterior enhancement and had few internal echoes. The presence of an abscess was diagnosed.

Fig 1



Transverse Section of the pelvi- showing the abscess cavity (AB) posterior to the bladder (BL)

At surgery, a thick inflamed peritoneum containing purulent peritoneal effusion, and matted coils of terminal ileum enclosing the perforated appendix with faecolith lying free in the enclosure was seen. The appendix was excised and peritoneal lavage done with physiologic saline. The patient did well postoperatively.

DISCUSSION

Appendicitis and its complications can be diagnosed with sonography with high accuracy.[5] A true positive rate (sensitivity) of 90%, true negative rate (specificity) of 72.2%, accuracy of 86.4%, predictive value for a positive sonogram of 92.6% and negative predictive value of 65%, have been reported in ultrasound evaluation of equivocal cases of appendicitis in children.[6] However, the main aim of referring patients with appendicitis for ultrasound is to rule out other complications of appendicitis. Appendicitis may at times be complicated by an abscess. The appendiceal abscess is formed by the obstruction of the lumen of the appendix. Inflammation causes oedema, formation of pus and increased secretion with rapid rise in pressure in the obstructed segment which results in perforation.[1] Following perforation the content of the appendix leaks into the peritoneal cavity causing further inflammatory changes. The structures might become matted and the lesion walled off to become an abscess.

The location of appendiceal abscess usually has a direct relationship with the anatomical position of vermiform appendix. The position of appendix is variable but it is usually retrocaecal.[2] The appendix has a 21% frequency of being located in the pelvis.[3] If the appendix is located in the pelvis the abscess would be in the pelvis, posterior to the bladder. The posterior wall of the bladder would be deformed by pressure from the abscess cavity (mass effect). The appendix in this patient may have been pelvic in position. The appendix may very rarely find its way into the hernial sac, especially when it is very long and lying free within the peritoneal cavity. Infection and subsequent perforation may lead to abscess formation in the sac. The pus will be enclosed within a thick inflammatory adhesions around the spermatic cord. In this unusual case, the patient may be well with absence of gastrointestinal upset. This is explained by the fact that the appendix lies extra abdominally and the resulting peritonitis would be limited to the hernial sac only.[3]

Ultrasound may diagnose appendicitis accurately and also evaluate other complications associated with it. Complications such as abscesses are easily seen. Acute appendicitis may be easily diagnosed clinically. Therefore, we are of the opinion that all patients presenting with right lower quadrant pain in whom appendicitis is highly probable should have ultrasound investigation. This is especially important if the patient did not seek medical attention early. A worrying trend is that some of these patients stay at home and take unprescribed and unsupervised antibiotic regimen. The consequence of this is that the abscess (complication) is masked clinically as it forms and laboratory results might become misleading.

SUMMARY: Pelvic abscess is uncommon in acute appendicitis. It may however complicate

acute appendicitis in patients who do not seek medical aid early. Clinicians should therefore refer patients with suspected acute appendicitis who did seek medical aid early for sonographic evaluation.

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