Emphysematous pyelonephritis - Is surgery necessary?

Joseph Butler, Ree'Thee Bhatt, Gionathan Amante*

Milton Keynes University Hospital Trust, Milton Keynes Hospital, UK

Introduction: Emphysematous pyelonephritis is a rare, life threatening acute suppuration of the kidney, characterised by the presence of air in the renal parenchyma, sometimes extending to the surrounding tissue. *E. Coli* and *Klebsiella* are the most common causative organisms, but the exact pathogenesis is poorly understood. It carries a high mortality, cited up to 50% and therefore requires prompt diagnosis and management.
Case description: A 52-year old woman presented to A&E with a two day history of severe left-sided abdominal pain, rigors, vomiting and increased urinary frequency. Her past medical history was significant for non-insulin dependent Type 2 diabetes mellitus, a well-established risk factor that is present in 90% of cases. On examination, she had marked left flank tenderness, tachycardia and pyrexia. Bloods showed raised inflammatory markers with a severe AKI.
Results and Conclusions: A CT KUB carried out in A&E showed air bubbles in the parenchyma and calyceal system of the left kidney, which confirmed emphysematous pyelonephritis. As there was no obstruction, the decision was made to manage conservatively. She was started on intravenous empiric metronidazole and tazocin, aggressive fluid resuscitation and close monitoring of her blood glucose. On day 3, initial blood cultures grew ESBL and tazocin was switched to meropenem and amikacin. A repeat CT scan on day 4 showed complete resolution of the parenchymal gas. Nonetheless, she continued to have recurrent pain and pyrexia. She stayed in hospital for a total of 16 days, with conservative management alone significantly improving her AKI and pyelonephritis. She was discharged with analgesia for residual loin tenderness.
Take home message: As portrayed in this case, young diabetic women are predisposed to developing emphysematous pyelonephritis. Nephrectomy remains the treatment of choice in most patients, whilst nephrostomy drainage is required in patients with urinary obstruction. Systematic reviews have indicated that antibiotic therapy with nephrostomy carries a reduced mortality risk in comparison to antibiotic therapy with emergency nephrectomy, though there are currently no guidelines available to optimally manage the condition. Prompt CT diagnosis and targeted antibiotic therapy in the initial assessment of this patient were crucial in preventing her from having to undergo an invasive surgical procedure.

http://dx.doi.org/10.1016/j.nhccr.2017.10.024

Inflammatory fibroid polyp - a cause of small bowel obstruction

Hiam Al-Droubi*, Neeraj Lal, Hussain Najam, Shahzad Khan, Himaz Marzook, Naseem Waraich, Sam McBride

Department of Surgery at Queens Hospital, Burton-upon-trent, UK

Introduction: Inflammatory fibroid polyps (IFPs) are rare, benign tumours originating from the submucosa of stomach or small bowel. They account for only 0.1-3.0% of all gastric polyps. Histogenesis remains unknown. In adults, benign tumours such as IFPs are an uncommon cause of small bowel obstruction.
Case description: A 54 year old male patient with known hypertension presented to the emergency department with a 24 hour history of sudden onset and severe right iliac fossa pain, which progressively worsened. He was pyrexial on admission, had decreased appetite and had significant weight loss over the previous few months. There were no other gastrointestinal symptoms. The clinical examination and laboratory findings were consistent with a diagnosis of appendicitis. However, a CT scan of the abdomen and pelvis was suggestive of small bowel obstruction. This scan was reported by two radiologists due to the inconclusive aetiology of the small bowel obstruction. Though the first impression was acute-on-chronic crohn's disease, on further analysis of the images a well defined oval shaped homogenous mass was noted in the distal ileum. An MRI scan confirmed terminal ileal inflammatory changes with intraluminal cystic changes. The patient underwent a laparoscopic right hemicolectomy. Intraoperatively, a cystic mass in the terminal ileum was found to be causing small bowel obstruction. Histology revealed that the mass was composed of fusiform and stellate shaped stromal cells with marked oedema and eosinophilia consistent with the diagnosis of IFP. The patient had an uneventful postoperative recovery.
Results and Conclusions: Despite the fact that inflammatory fibroid polyps are very rare lesions, they should be taken into consideration as a differential diagnosis in patients presenting with small bowel obstruction, as prompt surgical resection is the only known effective treatment.

http://dx.doi.org/10.1016/j.nhccr.2017.10.025

A written consent has been taken from the patient to submit this case report.

Case report: A rare presentation of right illiac fossa pain

Abida Sultana*, Ahmed Saad, Yan Mei Goh, Kyi Toe

Milton Keynes University Hospital, Milton Keynes, UK

Introduction: Duplex appendix is a rare congenital abnormality with an incidence of 2 in 50,000. Incidences of duplex appendicitis are a rare but recognised phenomenon. Unusual presentation of this congenital abnormality can lead to delays in diagnosis and management.
Case description: A 42-year-old male presented with a two-day history of right iliac fossa pain and raised inflammatory markers. He underwent diagnostic laparoscopy where a normal appendix was seen. Laparoscopic appendicectomy was not performed. He represents several years later with similar symptoms and another diagnostic laparoscopy was performed revealing a normal appendix. Subsequent laparoscopic appendicectomy was performed which was histopathology confirmed as a normal appendix. His symptoms did not improve after surgery and he developed localised guarding in the right iliac fossa, low grade pyrexia, tachycardia and raised inflammatory markers. An ultrasound scan was performed which was unremarkable. Computed tomography (CT) abdomen revealed a small collection from which extended a thin tubular structure ending in the terminal ileum. A third diagnostic laparoscopy was performed. The small collection was not identified and conversion to midline laparotomy revealed a second necrotic friable appendix leading to a retrocaecal and retroileal cavity (abscess). This was confirmed on histopathology to be a gangrenous appendix with secondary peritonitis. He was discharged from hospital several days post-operatively. A year later he represented to our services with an incisional hernia which was repaired laparoscopically.
Conclusions: Dual appendix is a well described but rare congenital abnormality that is well described by the Cave-Wellbridge classification. This congenital abnormality is often recognised incidentally at surgery or on post-mortem examination. Radiological studies are often not useful aids in making the diagnosis of duplicate appendix. Hence the possibility of a duplex appendix should be considered and sought during diagnostic laparoscopy performed in patients presenting with recurrent right iliac fossa symptoms.

http://dx.doi.org/10.1016/j.nhccr.2017.10.026