

Nephroquiz
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Acute abdominal pain and chills in an ADPKD transplant recipient

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Case presentation

A 61-year-old female kidney transplant recipient presented with acute abdominal pain and chills. She was diagnosed with autosomal dominant polycystic kidney disease (ADPKD) at the age of 35 and had suffered from several renal cyst haemorrhages. She had been successfully transplanted with a kidney from a deceased donor 1 month earlier, after spending 5 months on haemodialysis; a right nephrectomy was performed along with the transplantation. Immunosuppressive regimen included tacrolimus, mycophenolate mofetil and steroids. The post-operative period was uncomplicated with a prompt fall of serum creatinine to 1.5 mg/dL (132 µmol/L). On clinical examination, temperature was 37.1°C, and the abdomen was slightly painful in the periumbilical area. C-reactive protein was 10.5 mg/dL, and urine analysis was normal. Computed tomography and positron emission tomography scan were performed (Figure 1).

Question

What is your initial differential diagnosis, and the final one?

Answer

In an ADPKD transplant recipient with acute abdominal pain and chills, cyst infection—in a native kidney or in the liver—and diverticulitis should be especially considered. Computed tomography and positron emission tomography scan are currently the best diagnostic tools in this setting to exclude diverticulitis and cyst infection, respectively. In this case, the patient presented a diverticular disease of the small bowel complicated by diverticulitis and covert perforation.

Whereas an increased frequency of colon perforation from diverticular disease has been noted in ADPKD patients after kidney transplantation [1,2], small-bowel diverticulosis was rarely reported in this condition [3,4]. Although a causal link between ADPKD and small-bowel diverticulosis remains to be formally established, the hypothesis that *PKD1* and *PKD2* mutations could predispose to small-bowel diverticulosis is supported by the expression of polycystin 1 and polycystin 2 in intestinal smooth muscle [5], and by the abnormal contractility of smooth muscle in *Pkd2* +/- haploinsufficiency [4].

Surgical resection of the involved small-bowel segment is usually the preferred treatment in patients with complicated jejunoileal disease [6]. However, the very recent renal transplantation and the favourable outcome (with rapid, complete and sustained resolution) with a 3-week course of ciprofloxacin 500 mg b.i.d., metronidazole 500 mg t.i.d. and a bowel-sparing diet supported the choice of conservative management in our patient.

Conflict of interest statement. None declared.

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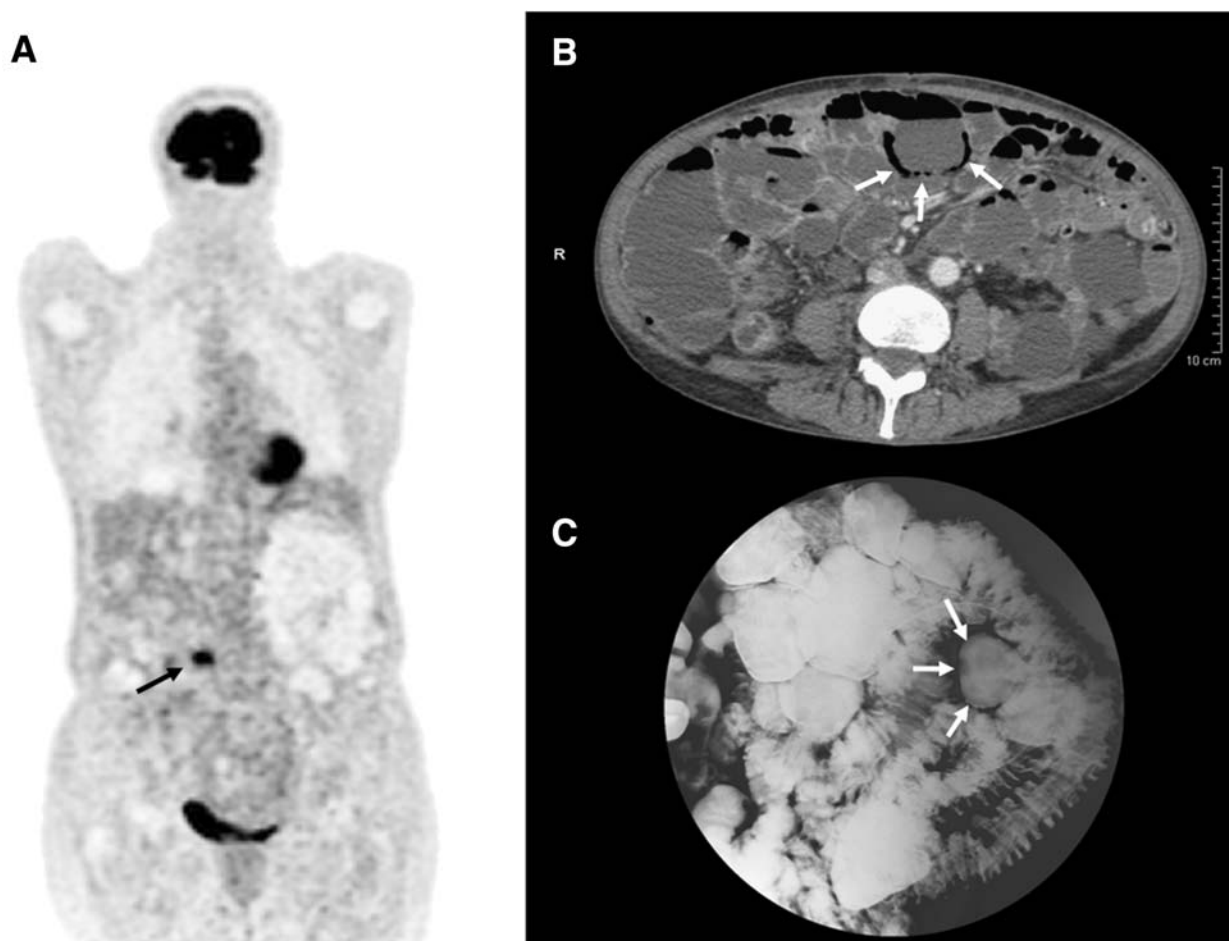


Fig. 1. (A) Positron emission tomography revealed an increased uptake of 18-fluorodeoxyglucose in the median abdomen. (B) Computed tomography showed a diverticulosis in the jejunoileum with focal dilatation and parietal pneumatosis of a small-bowel handle. (C) Barium intestinal transit—performed later—confirmed jejunoileal diverticulosis.