CASE REPORT

Intraperitoneal pseudocyst formation: Complication of fungal peritonitis in continuous ambulatory peritoneal dialysis

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Abstract

A 14-year-old girl, with end-stage renal disease on continuous ambulatory peritoneal dialysis (CAPD) the last 4 years, after an episode of Candida albicans was switched to hemodialysis. One month later she came back because of a palpable – painful abdominal mass and abdominal distention. Computed tomography (CT) and ultrasound examination demonstrated a demarkated fluid collection in the lower abdomen and pelvis. The cyst was drained percutaneously and the culture disclosed candida albicans which was treated with fluconasole. Two months later, the girl was admitted again with the same symptoms. An investigative laparotomy was undergone and the cyst was drained again. Fluid cultures were negative. CT abdomen examination six months later was negative for cyst relapse. In conclusion, intraperitoneal pseudocyst is a serious complication of CAPD. Surgical intervention may be preferable to percutaneous drainage. *Hippokratia 2007; 11 (4): 219-220*

Key words: *peritoneal dialysis, fungal peritonitis, intraperitoneal pseudocyst*

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Fungal peritonitis is a serious complication of peritoneal dialysis, usually leading to catheter removal and discontinuation of the method[1,2]. Intraperitoneal pseudocyst formation is an uncommon complication of peritonitis in patients on continuous ambulatory peritoneal dialysis (CAPD). We report a patient with an abdominal pseudocyst occurring as a complication of fungal peritonitis.

Case report

A 14-year-old girl, with end-stage renal disease, on CAPD the last 4 years, had six episodes of peritonitis. Ther first five episodes due to bacterial peritonitis were treated with intraperitoneal (IP) infusion of antibiotics. The last one, caused by Candida albicans was treated with IP infusion of fluconasol. After two weeks' ineffective treatment the catheter was removed and the patient was switched to hemodialysis. One month later she was admitted to the hospital with the same symptoms and a history of weight loss, poor appetite, intermittent fever and vomiting. The abdominal ultrasound disclosed a large unilocular encysted fluid collection in the lower abdomen in front of the intra-abdominal organs (Figure 1).

Abdominal computed tomography (CT) demonstrated a homogenous mass sited in the lower abdomen and pelvis, sharply demarcated (Figure 2). A total of 2 l of

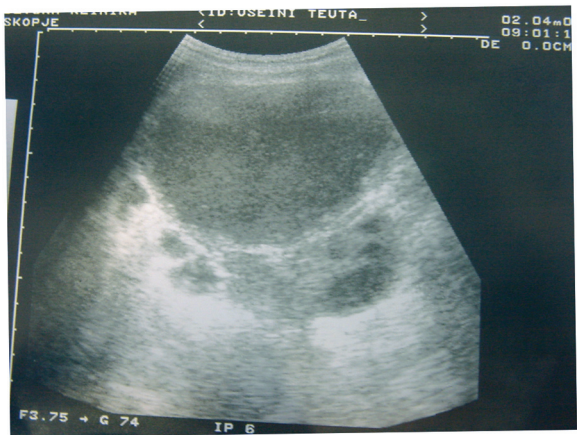

Figure 1. *Ultrasound examination demonstrated a large unilocular cystic mass*

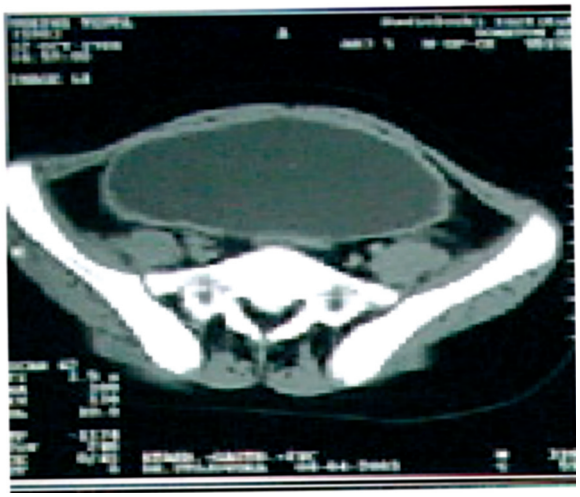

Figure 2. *Abdominal computer tomography demonstrated homogenous mass placed in the lower abdomen and pelvis*

fluid was drained from the cyst percutaneously with CT guidance. Fungal culture of the fluid collection was positive for candida albicans. The patient was treated with fluconazol iv for 21 days. Control culture from peritoneal punctuate was negative. Two months later, the girl was admitted again for recurrence of abdominal pain and a painful tender mass in the same location as previously. This time, investigative laparotomy was undergone, the cyst was drained and two liters of dark brown thin fluid were removed. Unfortunately the extensive fibrous capsule could not be excised. Bacterial and fungal cultures were negative. CT examination performed six months after surgery showed no abnormality (Figure 3).

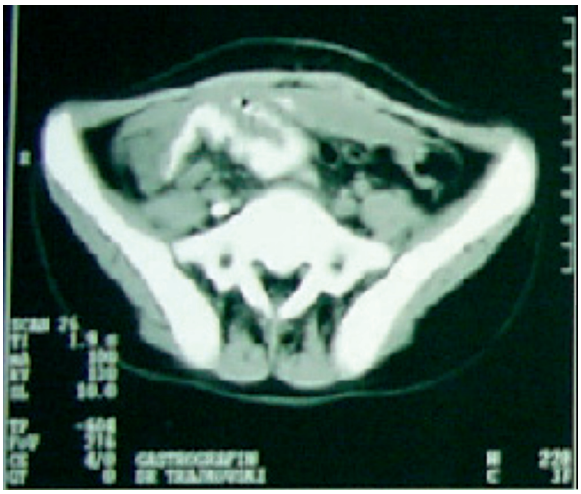

Figure 3. *CT examination performed six months after surgery showed no abnormality*

Discussion

Fungal peritonitis in CAPD patients remains the major cause of method drop out[3]. Catheter removal is often required to the treatment of the infection[4]. It is noteworthy that intraperitoneal pseudocyst is rarely mentioned in the literature as a complication of CAPD-associated peritonitis[5].

Clinical findings associated with an intraperitoneal pseudocyst include abdominal pain, low-grade fever, leukocytosis, nausea and vomiting[5].

In most patients radiographic diagnosis can be established with a combination of CT scan and abdominal ultrasound[5], as it was demonstrated in our patient. Pseudocystis can have serious consequences if not identified and properly treated. It has been implicated as a source of recurrent peritonitis, mechanical problems related to CAPD and sclerosing peritonitis[6].

In this patient there was no evidence of sclerosing peritonitis. An association between pancreatitis and end stage renal failure and dialysis has been suggested[7], but in this case the pancreas was normal.

Diagnostic imaging of the complication of CAPD is important because such evaluation can aid in the treatment decision process. It might be reasonable to consider CT or magnetic resonance peritoneography in patients with persistent abdominal pain, recurrent peritonitis or mechanical problem to identify and manage the problem[8].

In our patient ultrasound-guided aspiration was unsuccessful. Patient developed a fluid collection after two months, with abdominal pain and distention. The investigative laparotomy to drain the pseudocyst cavity was successful.

In conclusion, intraperitoneal pseudocyst is serious complication of CAPD-associated peritonitis in patients on CAPD. Clinical findings of persistent fever, abdominal pain, and tenderness with an associated leukocytosis occurring after treatment of peritonitis suggest the diagnosis. Imaging procedures may be helpful in establishing the diagnosis. Drainage of the pseudocyst is essential. Our experience suggests that surgical intervention may be preferable to percutaneous drainage.

References

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