Tuberculosis: still the great pretender!

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CASE REPORT

A 44-year-old Cambodian migrant was admitted with a sudden onset of cloudy continuous ambulatory peritoneal dialysis (CAPD) bags. She had been established on CAPD for 8 years following end-stage renal failure secondary to chronic glomerulonephritis. She gave an additional history of 1 month's increasing abdominal pain and weight loss. She was treated with intra-peritoneal antibiotics but failed to resolve. Her Tenckhoff (Baxter, Chicago) catheter was removed and haemodialysis commenced. She continued to experience pain and developed alternating diarrhoea with constipation and haematochezia. An abdominal computed tomography scan demonstrated a constricting annular lesion of the caecum resulting in small bowel obstruction (*Figure 1*).

At hemicolectomy there was a striking granulomatous colitis and lymphadenitis with concentric compression of the lumen and ulceration. Acid-fast bacilli were identified within the cytoplasm of multinucleated giant cells (*Figure 2*). She gave no prior history of tuberculosis, and chest X-ray and Mantoux testing at the time of her immigration and on admission were within normal limits. The patient rapidly responded to triple therapy and was recommenced on CAPD 6 months after surgery.

DISCUSSION

Tuberculosis is more common in uraemic patients, possibly related to impaired cell-medicated immunity, and previous or ongoing immunosuppressive therapy. Tuberculous peritonitis makes up to 2–65% of all cases of peritonitis complicating continuous ambulatory peritoneal dialysis (CAPD) (Vas, 1994). It is often difficult to diagnose, as tuberculosis is capable of mimicking most intra-abdominal pathologies including carcinoma and CAPD-peritonitis. Peritoneal white cell count (total and cell type) are mostly unhelpful and culture is often negative or clouded by concurrent or seemingly resistant bacterial peritonitis (Lui et al, 1996).

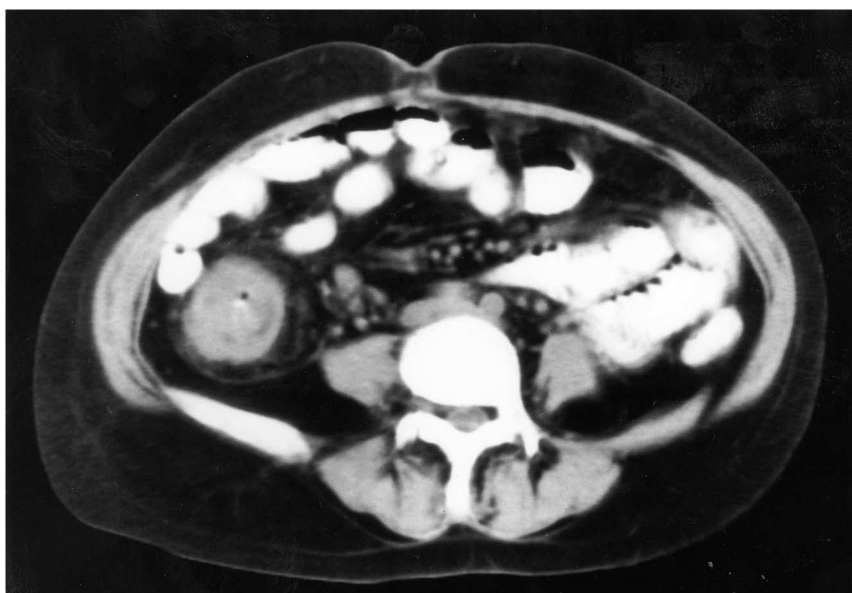

Figure 1. Computed tomography scan of the abdomen showing a constricting annular lesion of the caecum with resulting small bowel obstruction.

Laparoscopy and peritoneal biopsy are thought to be of diagnostic value, and are usually performed at the time of catheter removal (Herrera et al, 1996). Although no biopsies were taken in this case, the laparoscopy was normal and the usefulness of this procedure remains to be established. It may be more useful to detect mycobacterial DNA in peritoneal effluent by polymerase chain reaction (PCR) techniques (Herrera et al, 1996).

The frequency of pulmonary involvement in cases of intestinal tuberculosis is less than 50% and in the majority of patients a chest X-ray is completely unremarkable, as it proved in this case. Extra-pulmonary disease is more common in immunosuppressed individuals including those with uraemia. Up to 90% of intestinal tuberculosis is segmental, involving the ileo-caecal region, and the vast majority of affected sites are within reach of colonoscopy (Haddad et al, 1987).

A computed tomography (CT) scan can also be useful, often showing preferential thickening of the ileo-caecal valve and medial wall of the caecum, extension to the terminal ileum or extensive lymphadenopathy. Like our patient, many CAPD patients with tuberculous peritonitis have unrecognized ileocaecal tuberculosis with peritonitis as a secondary phenomenon (Vas, 1994). Therein the diagnosis is

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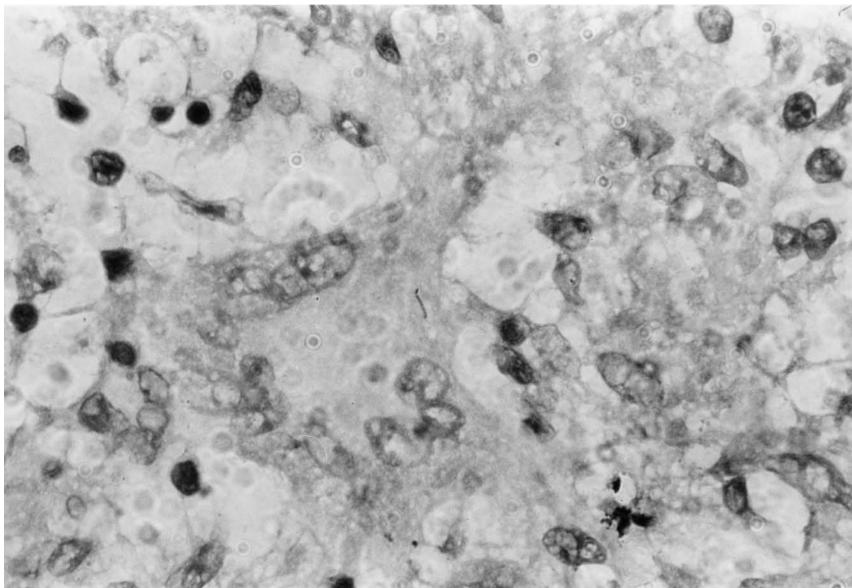

Figure 2. Acid-fast bacilli within the cytoplasm of multinucleate giant cells.

facilitated by CAPD as well as being made more likely.

In the past, surgical intervention for abdominal tuberculosis was required in up to 75% of cases, usually for bowel obstruction (Haddad et al, 1987). Most ulcerative and fistula complications now respond to antimicrobial chemotherapy with surgery reserved for haemorrhage, obstruction or when the diagnosis of carcinoma cannot be excluded or appears most likely, as in this case.

Modification of the doses of isoniazid, rifampin, ethambutol and pyrazinamide are required in renal impairment. In addition, catheter removal is sometimes required for intractable peritonitis. However, CAPD may not need to be interrupted if management is instituted early. Despite the common delay in diagnosis, peritoneal membrane clearances appear to be well preserved long-term following appropriate therapy (Herrera et al, 1996).

CONCLUSIONS

This case highlights the ability of tuberculosis to readily mimic significant intra-abdominal pathologies. It should therefore be considered much earlier, particularly with high-risk patients or where abdominal symptoms fail to settle with conventional treatment. **HM**

Haddad FS, Ghossain A, Sawaya E, Nelson AR (1987) Abdominal tuberculosis. *Dis Colon Rectum* **30:** 724–35

Herrera CM, Delgado RM, Riscos AG et al (1996) *Mycobacterium tuberculosis* as a cause for peritonitis in a patient undergoing continuous-ambulatory-peritoneal-dialysis. *Nephron* **73:** 318–9

Lui SJ, Lo CY, Choy BY et al (1996) Optimal treatment and long-term outcomes of tuberculous peritonitis complicating continual ambulatory peritoneal dialysis. *Am J Kid Dis* **28(5):** 747–51

Vas SI (1994) Renaissance of tuberculosis in the 1990's: lessons for the nephrologist. *Perit Dial Int* **14:** 209–14

IN THE PUBLIC'S VIEW...

When is a parent not a parent?

Children born after sperm donation are to be given the legal right, as adults, to find out who donated the sperm. Most of the newspapers covered the story.

Egg donation is less common, because the donors have to do a bit more than go behind a curtain with a jar and a dirty mag, but the right will apply to people conceived after egg donation as well. Reproductive technology will soon include techniques involving the incorporation of genetic material from three, four or five individuals. Will they all be 'parents'?

As is common with issues such as this, emotion fills the air and you can be sure to hear the dread phrase 'basic human right'. This phrase is supposed to kill all argument. Sure enough, Elizabeth Wincott, speaking for the Project Group on Assisted Reproduction, declared it a:

> **'fundamental negation of human rights to prevent people knowing who their biological parents are'.**

I think of a child, lovingly brought up by a couple. The child calls them mummy and daddy (let's leave aside parents who are mummy and mummy or daddy and daddy), and it plays with its siblings. It happens not to share some or any genetic material with its parents and its siblings, but it is happy where it is, and relationships are more important than genes. Even if the child is unhappy (or as an adult realizes childhood unhappiness) what makes it a 'right' to know where one's DNA came from?

Gamete donors are unlikely to carry dread diseases, which invalidates that particular argument for knowing one's genetic stock. Some speak of the 'biological imperative'. Seeing as there is no way of proving that this actually exists, I put it down more to curiosity. Entirely understandable, but hardly a right, and possibly harmful.

Past sperm donors will not be identifiable, but it is a 'priority' at the Department of Health to put a tracing system in place for future donors. To me, this is good evidence that health priorities are determined not by common sense or by need but by vociferous pressure groups. The wording of the *Observer*'s story alludes to some of the worries: in-vitro fertilization children being allowed to 'track down' their biological parents.

When DNA testing was first introduced and doctors began investigating families for certain genetic diseases, it soon became apparent that between one in five and one in ten people could not have been their supposed father's offspring. Nowhere in all the rhetoric from the opposing sides on the issue of identifying sperm donors have I seen mention of this uncomfortable fact.

Does the Project Group on Assisted Reproduction or the Department of Health foresee a time when anyone can demand that their father be DNA tested to prove his relationship to them? And should he fail the test, can they then oblige their mother under pain of legal sanction to reveal who their father is? **HM**

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