The Royal College of Surgeons of England

Ann R Coll Surg Engl 2000; **82**: 196–197

Case report

Multicystic peritoneal inclusion cysts: the use of CT guided drainage for symptom control

DS Inman, AW Lambert, DC Wilkins

Department of Surgery, Derriford Hospital, Plymouth, UK

Our case study is that of a teenage male presenting with multilocular peritoneal inclusion cystic disease that is now managed symptomatically with a minimally invasive, repeatable technique. Between admissions he leads a relatively normal life. Symptomatic control in MPIC is possible using repeated CT guided aspirations.

Key words: Multilocular peritoneal inclusion cystic disease – CT guided aspirations

Multilocular peritoneal inclusion cystic disease (MPIC) is a rare benign condition primarily affecting women of childbearing age. In most cases, surgical excision of the cysts has been the mainstay of treatment, but there is a 50% local recurrence rate.[1]

We present a 13-year-old male who, during a period of 9 years, underwent three laparotomies for tumour debulking and several courses of chemotherapy. During the past 5 years, symptomatic relief has been achieved with repeated CT guided cyst puncture and aspiration.

Case presentation

A 13-year-old boy presented with abdominal discomfort and swelling, shortness of breath, back pain, urinary frequency and constipation. A CT scan showed multiple fluid filled cysts throughout his peritoneal cavity. At laparotomy, these were found to be inseparable from both visceral and parietal peritoneum. Extensive debulking of the cysts was carried out, and a diagnosis of MPIC made.

Symptomatic relief followed laparotomy, but the pressure symptoms returned after a few months. In the 9 years following presentation, he underwent three laparotomies for debulking and 16 courses of chemotherapy which were ineffective in controlling his symptoms. During the past 5 years, a policy of repeated cyst drainage under CT guidance has been followed (Fig. 1), dependent upon the patient's assessment of his discomfort.

In total, 31 procedures have been carried out and 51,500 ml aspirated. The mean drainage interval is 14 weeks (range, 3–28 weeks). Although there has been no increasing trend in the frequency of aspirations, the volume drained has increased from 3110 ml in 1992 to 12,700 ml in 1998.

Correspondence to: Mr Anthony W Lambert, 8 Russell Avenue, Hartley, Plymouth PL3 5RA, UK

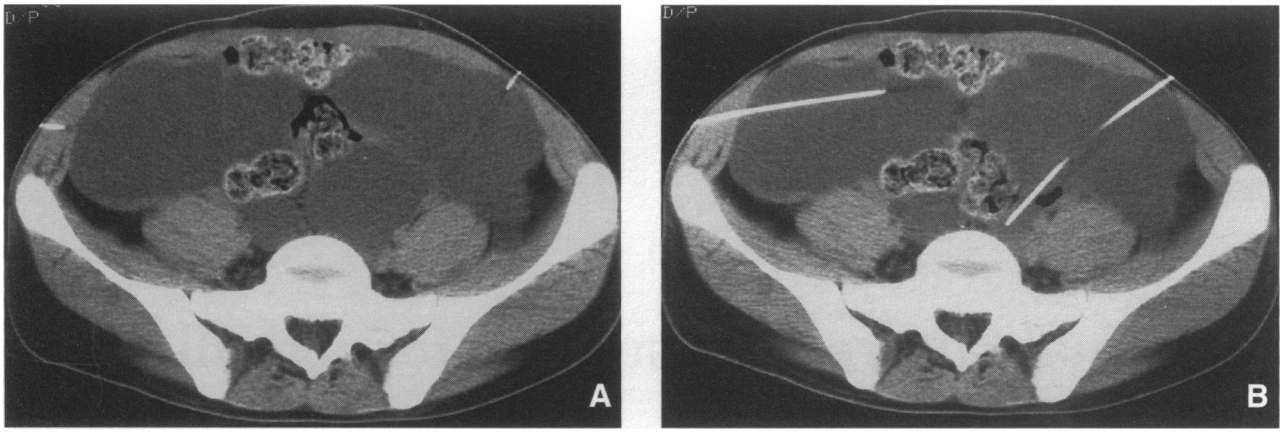

Figure 1 CT scans demonstrating (**A**) large cysts and (**B**) needle positions following aspiration of the left posteriorly placed cyst

Discussion

The condition known as benign cystic peritoneal mesothelioma was first described by Plaut in 1928 who came across a collection of the characteristically thin walled cysts as an incidental finding during surgery for uterine leiomyomas.[2] The cysts, filled with clear fluid, are lined by mesothelial cells and may affect only a very localised area of the peritoneal cavity or, as in our case, involve the entire abdomen. In 1989, Ross *et al* reviewed a series of 59 cases and suggested that multilocular peritoneal inclusion cysts would be a more appropriate name.[3]

MPIC is a very rare condition occurring mainly in women of child-bearing age, the average age at diagnosis being about 35 years.[4] It is more common in patients who have had previous abdominal surgery. The aetiology is unknown but it is most likely to be a reactive phenomenon, and not neoplastic as previously thought.[3] Unlike pleural mesothelioma, no link has been shown with asbestos exposure.

The diagnosis is made histologically and should be differentiated from multicystic abdominal lymphangiomata, although cysts in this condition contain a milky, chylous fluid, are less likely to recur after excision, and are more common in children.[3] Surgical excision, particularly of localised disease, is the treatment of choice but has been combined with intra-operative sclerotherapy in one reported case.[5] Chemotherapy and radiotherapy appear to be of no value.[6] The local recurrence rate of the cysts after resection has been reported to be about 50%,[1] with treatment-free intervals ranging from 4 months to 12 years.[3]

MPIC is a benign condition with only one death reported in the literature. This patient had multiple cysts completely filling the abdomen and refused therapy.[7]

References

1. Datta RV, Paty PB. Cystic mesothelioma of the peritoneum. *Eur J Surg Oncol* 1997; **23**: 461–2.
2. Canty MD, Williams J, Volpe RJ, Yunan E *et al*. Benign cystic mesothelioma in a male. *Am J Gastroenterol* 1990; **85**: 311–5.
3. Ross MJ, Welch WR, Scully RE. Multilocular peritoneal inclusion cysts (so-called cystic mesotheliomas). *Cancer* 1989; **64**: 1336–46.
4. O'Neil JD, Ros PR, Storm BL, Buck JL, Wilkinson EJ. Cystic mesothelioma of the peritoneum. *Radiology* 1989; *170*: 333–7.
5. Benson RC, Williams TH. Peritoneal cystic mesothelioma: successful treatment of a difficult disease. *J Urol* 1990; **143**: 347–8.
6. Katsube Y, Mukai K, Silverberg S. Cystic mesothelioma of the peritoneum. *Cancer* 1982; **50**: 1615–22.
7. Weiss SW, Tavassoli FA. Multicystic mesothelioma. *Am J Surg Pathol* 1988; **12**: 737–46.