THE STORY BEGINS…

• 51 year-old barber with no significant co-morbidities
• Five day history of progressively worsening left upper quadrant abdominal pain
• Three week history of low-grade fevers, occasional night sweats and 5kg weight loss which he attributed to anorexia.
• From Iran, moved to England five years ago. No travel outside the UK since emigration, did not consume alcohol, never smoked and not sexually active. Lived alone and never had any pets.

ON EXAMINATION

• Cachectic, pale and mildly clubbed. Cardiac apex displaced medially, reduced air entry on auscultation of left lung, left upper quadrant tenderness but no peritonism. No cervical, axillary or inguinal lymphadenopathy.
• Febrile (T 38.4), respiratory rate of 19 breaths per minute, saturations 98% on 3L oxygen via nasal canulae, blood pressure 98/72 mmHg and pulse 98 beats per minute.
• Normocytic anaemia (Hb 78, MCV 80) and raised inflammatory markers (WCC 18, CRP 298). HIV screen negative.

THE INSIDE LOOK

• Figure 1: Abdominal computed tomography (CT) imaging showing a large complex cystic lesion in the left subphrenium, measuring 20x16x14cm, with septations and haemorrhagic foci, causing mediastinal shift. The lesion was inseparable from the tail of pancreas, and also involved his spleen and gastric fundus, which were significantly displaced and compressed.
• Splenic vein thrombosis reported (not shown). Remaining pancreas oedematous, with a 16x5cm cystic outpouching between the liver and head of pancreas. Numerous enlarged para-oesophageal, upper abdominal and mesenteric nodes seen.
• Figure 2: chest radiograph showing large left pleural effusion with mediastinal shift.

WHAT COULD IT BE?

ΔΔ gastric malignancy, tuberculosis, ruptured hydatid cyst with secondary bacterial infection, ruptured pancreatic pseudocyst, lymphoma

• Initially, a hydatid disease queried based on CT findings, given Iranian background. Surgeons cautious of evacuating a probable hydatid cyst and patient referred for specialist management to the Liverpool School of Tropical Medicine. However, hydatid serology was negative despite extensive disease, excluding this diagnosis.
• His history too short to suggest tuberculosis. Gastroscopy to investigate malignancy not immediately possible, given haemodynamic instability.
• Amylase levels were normal, which made pancreatitis less likely but this can sometimes mask burn-out pancreatitis. Nonetheless, the patient denied any symptoms of recent pancreatitis.
• Lactate dehydrogenase levels and blood film were unremarkable making lymphoma less likely.

The patient was commenced on meropenem empirically, but became progressively breathless, necessitating intubation on Intensive Care Unit. Emergency surgical chest and abdominal drains were inserted, yielding 1.5 and 2 litres of pus respectively. Pus aspirates revealed an interesting diagnosis.

THE ANSWER

• Pleural and abdominal pus aspirates grew small, catalase-negative, alpha-haemolytic colonies on blood agar with characteristic caramel odour (Figure 3). Microscopy showed gram positive cocci in chains, confirmed as Streptococcus intermedius by MALDI-TOF. Isolates were sensitive to penicillin and the patient was switched to intravenous benzylpenicillin with good response. Blood cultures were negative.
• S.intermedius is a member of the Streptococcus anginosus group, previously known as the milleri group. These organisms are part of normal mouth and gastrointestinal flora. As opportunists, they have been associated with disseminated multi-organ abscesses, although cases have been reported in immunocompetent individuals.
• This patient had a normal echocardiogram and no brain abscesses. Repeat imaging showed improvement in abscess size and he successfully completed a six week course of antibiotics with anticoagulant cover for splenic vein thrombosis.