PICTORIAL MEDICINE

Hepatosplenic candidiasis complicating acute myeloid leukaemia

Patient 1

A 33-year-old man with acute myeloid leukaemia developed neutropenic fever after induction chemotherapy with cytarabine and daunorubicin. The first blood culture was positive for *Escherichia coli* and the patient was treated with imipenem (500 mg every 6 hours intravenously [IV]). However, the fever persisted and liver function tests were deranged; alkaline phosphatase (ALP) was 166 U/L (reference range, 50-120 U/L), alanine aminotransferase (ALT) was 61 U/L (reference range, 10-40 U/L), and bilirubin was 220 μmol/L (reference range, 5-21 μmol/L). Repeat blood culture was negative. Computed tomography (CT) showed multiple new hypo-enhancing nodules scattered over the liver, spleen, and kidneys (Fig 1). A diagnosis of hepatosplenic candidiasis was made, and the patient responded to treatment with amphotericin B (40 mg daily IV). After recovery of the neutrophil count, the patient started oral fluconazole (400 mg daily) and his ALP and bilirubin returned to normal.

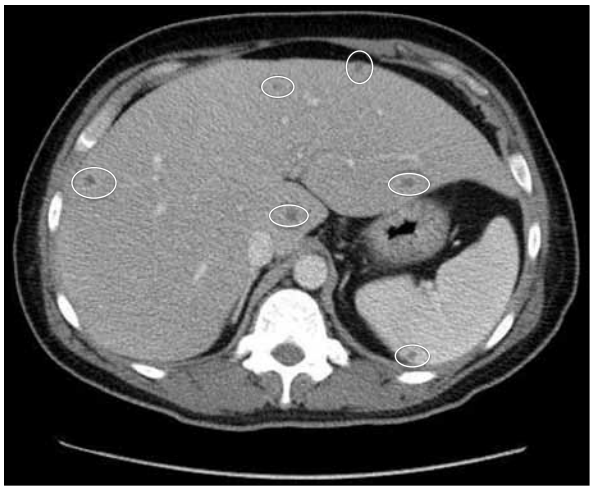

FIG 1. A computed tomographic scan of patient 1 showing multiple hypo-enhancing nodules over the liver and spleen (circles)

Patient 2

A 58-year-old man with acute myeloid leukaemia was given consolidation chemotherapy with cytarabine and daunorubicin. His sputum culture was positive once for *Klebsiella pneumoniae* and he was treated with piperacillin and tazobactam (4.5 g every 8 hours IV). However, the fever persisted and liver function tests were deranged; ALP was 656 IU/L, ALT was 158 IU/L, and bilirubin was 436 μmol/L. Blood culture was positive for *Candida tropicalis*. Computed tomographic scan showed multiple hypo-enhancing nodules over the liver, spleen, and kidneys (Fig 2). Repeat blood culture was positive for fungus despite treatment with amphotericin B (40 mg daily IV). He was given anidulafungin (100 mg daily IV).[1] and the fever settled. He was later given oral fluconazole (400 mg daily) and discharged home.

FIG 2. A computed tomographic scan of patient 2 showing multiple hypo-enhancing nodules over liver and spleen (circles)

Discussion

These two very similar patients illustrate that disseminated *Candida* infection is not that uncommon in patients with leukaemia.[2] Patients with persistent fever despite appropriate antibacterial treatment together with increased ALP and hyperbilirubinaemia should raise the possibility of hepatosplenic candidiasis. Serial CT of the abdomen would show interval new multiple hypo-enhancing nodules that resolve after antifungal treatment.[3] Appropriate antifungal treatment can then be given accordingly.

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References

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3. Anttila VJ, Ruutu P, Bondestam S, et al. Hepatosplenic yeast infection in patients with acute leukemia: a diagnostic problem. Clin Infect Dis 1994;18:979-81.

Answers to CME Programme
Hong Kong Medical Journal April 2011 issue

Hong Kong Med J 2011;17:89–95

I. A population-based analysis of incidence, mortality, and stage-specific survival of cervical cancer patients in Hong Kong: 1997-2006

A	1. True	2. True	3. False	4. False	5. False
B	1. True	2. False	3. True	4. True	5. True

Hong Kong Med J 2011;17:96–104

II. Factors affecting mortality in Hong Kong patients with upper limb necrotising fasciitis

A	1. True	2. False	3. False	4. True	5. True
B	1. False	2. True	3. True	4. False	5. True
C	1. True	2. True	3. False	4. True	5. False