

A Teacher With Weight Loss And Fever

Case History:

A 39-year-old teacher presented with weight loss of 10kg in the past 6 months. He also had low grade fever for three weeks and dry cough. There were vague abdominal pain and occasional loose bowel motion which was not associated with blood or mucus. He was known to be a hepatitis B carrier since the age of 15 years. He was married and denied any extra-marital activities. There was no history of travel overseas or to China. Physical examination revealed an oral temperature of 37.5°C. There was no pallor, jaundice or lymphadenopathy. His chest was clear. However, abdominal examination showed mild tenderness at the right lower quadrant. There was no hepatosplenomegaly or abnormal mass.

The initial full blood picture results were:

White cells count	$11.80 \times 10^9/l$ H
Haemoglobin	12.40 g/dl
Platelet	$214 \times 10^9/l$
Haematocrit	0.354 L
ESR	71 mm/hr
Neutrophils	$8.72 \times 10^9/l$ H
Lymphocytes	$2.14 \times 10^9/l$
Monocytes	$0.70 \times 10^9/l$
Eosinophils	$0.16 \times 10^9/l$
Basophils	$0.09 \times 10^9/l$

The other red cell indices were normal.

Question 1: What further investigations would you perform for this patient?

This gentleman presented with 6 month history of weight loss, low grade fever and vague chest and abdominal symptoms. The initial investigation should

include liver and renal function tests, thyroid function test, and investigations to look for infection including chest and abdominal x-rays, sputum and urine for microscopy and culture.

Question 2: The initial investigation results showed normal liver and thyroid functions and chest x-ray was normal. What were the possible differential diagnoses?

Infection should be excluded in patients with low grade fever and chronic weight loss. The common infections to be considered are tuberculosis (TB) and typhoid fever. TB may result in weight loss, low grade fever and dry cough. Abdominal symptoms in TB may suggest that the gastrointestinal tract is involved. There may be involvement of the distal ileum or the ileocaecal valve, although other sites of the gastrointestinal tract may also be affected. Typhoid fever can present with low grade fever, abdominal and constitutional symptoms. Specific gastrointestinal diseases to be considered include Crohn's disease and chronic pancreatitis. The onset of Crohn's disease is usually in the second and third decades, although a second peak occurs in the sixth decade. The initial presentation may be mild, with loose stool, weight loss and mild constitutional symptoms. Blood in stool is not common in Crohn's disease, unlike ulcerative colitis. Therefore the diagnosis of Crohn's disease is sometimes delayed for months to years. Chronic pancreatitis leading to malabsorption may present as weight loss and steatorrhoea. Two types of malignancies to be considered are hepatocellular carcinoma and lymphoma. Hepatitis B carriers are at high risk of developing hepatocellular carcinoma. The presenting features are usually vague in early stage. Lymphoma includes nodal diseases and extranodal disease. The latter can arise from the gastrointestinal tract. Both groups of disease can present with constitutional symptoms. The presence of abdominal symptoms suggests that the lymphoma is arising from the gastrointestinal tract.

PATHOLOGY FORUM

Question 3: How would you manage this patient?

Some other investigations are suggested to this patient. To look for TB, we can perform a Mantoux test, and collect sputum, early morning urine and/or gastric aspirate for TB culture. Sputum may be sent for polymerase chain reaction (PCR) test to detect presence of TB. PCR test gives a rapid result within a few days. Investigation of gastrointestinal TB include barium meal and follow through and colonoscopy with biopsy. A blood culture can be done to exclude infections with bacteriemia, and Widal test for typhoid fever. A paired sera 2 weeks apart may be required for Widal test. There is no pathognomonic laboratory test for Crohn's disease. Raised C-reactive protein is usually present. Small bowel enema or barium enema may demonstrate the whole or terminal ileum involvement. Colonoscopy is useful in diagnosing colonic involvement which usually presents as skipped lesions. Biopsies through colonoscopy can sometimes help to confirm the diagnosis. Serum amylase is not useful in diagnosis of chronic pancreatitis, but an abdominal x-ray may reveal pancreatic calcifications in the pancreatic ducts. Further investigations include ultrasonography, computed tomography (CT) or endoscopic retrograde cholangiopancreatography. Hepatocellular carcinoma has to be ruled out in every hepatitis B carrier with significant weight loss. The investigations include alpha-fetoprotein and liver ultrasonography. Suspicious lesions on ultrasonogram may require three-phase dynamic CT scan or hepatic arteriogram. Sometimes hepatic arteriogram is followed by injection of lipiodal and a CT scan is performed two weeks after the arteriogram to detect any retention of lipiodal by liver tumour. Lymphoma of the gastrointestinal tract can be investigated by barium studies or endoscopy. A CT scan is useful in assessing the para-aortic and intra-abdominal lymph node enlargements. Excisional biopsy of enlarged peripheral lymph nodes, if present, can confirm the diagnosis.

If the patient is confirmed to have TB, he should be referred to the government Tuberculosis and Chest Clinic for supervised drug treatment. Typhoid fever should be treated with a course of oral antibiotics, and quinolones are the choice for treatment. Management of Crohn's disease will depend on symptoms and the extent of involvement of the gastrointestinal tract. The primary drug for active Crohn's disease is 5-aminosalicylic acid (5-ASA) group and corticosteroids, administered topically or systemically. Corticosteroids should be reserved for moderate or severe disease and should not be used long-term because of inevitable side effects. Nutritional restitution and emotional support are part of the primary medical therapy. Management of chronic pancreatitis involves symptomatic treatment of pain and correction of pancreatic insufficiency. Simple analgesics will be adequate for mild cases while narcotics may be necessary for severe cases. Sometimes pain can be controlled by regional nerve blocks but the effect is short lasting and usually has to be repeated. Pancreatic enzyme replacement is also indicated. Surgery offers drainage to obstructed pancreatic ducts or resection of diseased pancreatic tissues and gives long-lasting pain control in over half of the patients. All patients with hepatocellular carcinoma should be evaluated for surgery first. Inoperable tumours may benefit from regional chemoembolisation, regional radiation therapy, alcohol injection or cryosurgery. Management of malignant lymphoma depends on the site and staging of the disease. A combination of surgery, radiation therapy and chemotherapy may be needed. ■

The comments have

been prepared by : Dr B C Y Wong, MBBS, MRCP,
FHKCP, FHKAM(Medicine)
Assistant Professor,
Division of Gastroenterology
and Hepatology,
Department of Medicine,
The University of Hong Kong.