A Forgotten Cause of Abdominal Pain

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SUMMARY: A case of tuberculosis presenting as intestinal obstruction in a Gurkha soldier is reported and the difficulties of diagnosis discussed.

Case Report

A 28 year old Gurkha was admitted with 4 weeks history of intermittent colicky abdominal pain and diarrhoea. The latter settled prior to referral. At three days post admission, he continued to complain of abdominal pain with symptoms of small bowel obstruction.

He developed a swinging pyrexia of 40°C and a tachycardia of 100/min. Blood pressure was mildly elevated at 158/95. Examination of his chest and heart was normal. His liver was palpable to 1cm and there was generalised distension, tenderness and obstructive bowel sounds were heard on auscultation.

Haemoglobin 115g/l. White cell count $11.5 \times 10^9/l$ with neutrophilia, monocytosis and lymphopenia. ESR 81mm/h. C-reactive protein 254mg/l. Albumin 27g/l. Amylase 56 u/l.

Mantoux test was non reactive. Chest X-ray was initially normal but later showed small pleural effusions. Abdominal X-ray was compatible with small bowel obstruction. Computerised Tomography showed increasing pleural effusion, without focal chest or abdominal lesions. Early morning urine was negative for acid fast bacilli. Ziehl-Nielsen staining was performed on nasogastric and pleural aspirates and again these were negative.

Initially he was managed conservatively with nasogastric suction and intravenous fluids. He did not settle on this regime and laparotomy was performed. This revealed a large amount of peritoneal fluid, widespread minute peritoneal deposits and multiple adhesions involving the small bowel and causing mechanical obstruction. The adhesions were divided, appendicectomy and omental biopsy performed. The peritoneal fluid was sent for biochemical and bacteriological examinations.

The diagnosis of abdominal tuberculosis was made

when the histology confirmed the characteristic granulomas of tuberculosis. Ziehl-Nielsen stain revealed few acid fast bacilli in the omental biopsy. Subsequently the mycobacterium was cultured from the peritoneal fluid. The patient was started on antituberculous treatment and made an uneventful recovery.

Discussion

Abdominal tuberculosis is not rare, nor is it confined to the poor, or patients with active pulmonary tuberculosis. The condition should be considered in the differential diagnosis of abdominal pain (1).

The symptoms and signs are variable (2). In the presence of pulmonary tuberculosis the diagnosis of the condition would be readily thought of, however, this was not evident in our case. The association between pulmonary and abdominal tuberculosis varies widely and has been reported to range from 1% to 60% (3,4,5). As in this case others have found intestinal obstruction to be the presenting feature (6).

Laboratory investigations were reported to have little diagnostic value (2), as in the case with a negative Mantoux test. Mycobacterium tuberculosis is isolated more easily from biopsy samples than from ascitic fluid (3, 7). In this case the organism was not cultured from ascitic fluid for some eight weeks, a method clearly unsuitable for early diagnosis.

Direct visualisation and biopsy of the peritoneum provides a definitive tissue for diagnosis (8). Laparoscopic biopsy has been successfully reported by some centres (3,8,9,10). However, in another series laparotomy was considered necessary to obtain diagnosis and relief obstruction in 81% of cases (11).

Abdominal tuberculosis therefore should be considered in cases of abdominal pain particularly among ethnic

minorities in the United Kingdom and peritoneal biopsy appears to be the quickest and most definitive diagnostic test.

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References

1. GITT S, HADDAD F, LEVENSON S. Tuberculous peritonitis: an overlooked diagnosis. *Hospitals Pract* 1992; **27**(1): 224-8.
2. SINGH V, JAIN AK, AGRAWAL AK, *et al.* Clinicopathological profile of abdominal tuberculosis. *Br J Clin Pract* 1995; **49**(1): 22-4.
3. NAFEH MA, MEDHAT A, ABDUL-HAMEED AG, AHMAD YA, RASHWAN NM, STICKLAND GT. Tuberculous peritonitis in Egypt : The value of laparoscopy in diagnosis. *Am J Trop Med Hyg* 1992; **47**(4): 470-7.
4. CHEN YM, LEE PY, PERNG RP. Abdominal tuberculosis in Taiwan: A report from Veterans' General Hospital, Taipei. *Tubercle and Lung disease* 1995; **76**(1): 35-8.
5. LINGENFELSER T, ZAK J, MARKS IN, STEYN E, HALKET J, PRICE SK. Abdominal tuberculosis: still potentially lethal disease. *Am J Gastroenterol* 1993; **88**(5): 744-50.
6. DAS P, SHUKLA HS. Clinical diagnosis of abdominal tuberculosis. *Br J Surg* 1976; **63**:941-946.
7. MARSHALL JB. Tuberculosis of the gastrointestinal tract and peritoneum. *Am J Gastroenterol* 1993; **88**: 989-999.
8. HOSSAIN J. AL-ASKA AK, AL-MOFLEH I. Laparoscopy in tuberculous peritonitis. *J R Soc Med* 1992; **85**(2): 89-91.
9. WILAIRATANA P, WILAIRATANA S. LEKHYANANDA S. CHAROENLARP P. Does Laparoscopy have a limited role in diagnosis of fibroadhesive tuberculous peritonitis? *Southeast Asian J Trop Med Public Health* 1993; **24**(4): 762-5.
10. MIMICA M. Usefulness and limitations of laparoscopy in the diagnosis of tuberculous peritonitis. *Endoscopy* 1992; **24**(6): 588-91.
11. GOKSOY E, DUREN M, UYGUN N. Gastrointestinal tuberculosis. 10 years experience in a surgical university clinic. *Chirurg* 1994; **65**(6): 546-50.