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Case report

Oesophageal tuberculosis: four cases

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SUMMARY Four Asian patients presented with dysphagia. In each case the oesophagus was involved by adjacent tuberculous subcarinal glands. The lungs were clear and symptoms of systemic illness were minimal. Findings at oesophagoscopy were non-specific and early diagnosis rested on a high index of suspicion and a strongly positive Mantoux test. Bacteriological proof was obtained early in only two of the cases.

Oesophageal involvement in adult tuberculosis is unusual. Morson and Dawson quote a reference to a single case from India.[1] Infection usually spreads to the oesophagus from adjacent disease in the lung, spine, or paraoesophageal glands, 'primary' lesions being rare.[2] The following four patients were seen between 1975 and 1979: three came from East Africa, one from Pakistan. They had been resident in the United Kingdom for from one to four years and their ages ranged from 37 to 43 years. They formed nearly 1% of the 455 new patients presenting with tuberculosis.

Case 1

An Asian lady, aged 40 years, presented in July 1975, with a history of dysphagia for eight months; the symptoms had gradually improved. Barium examination showed minor indentation of the oesophagus in the subcarinal region. Endoscopy showed a circumferential mucosal stricture, biopsies all showed normal mucosa. The aetiology of the stricture was obscure. The lungs were clear, but the Mantoux test was strongly positive. The patient was afebrile and no treatment was given. Slowly the dysphagia disappeared and endoscopy five months later was normal. In July 1976 she returned with fever and weight loss and, although the radiograph of the chest was normal, tuberculosis was suspected and treatment started. A right pleural effusion developed within six weeks but otherwise her recovery was uncomplicated.

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Case 2

In 1976 an Asian lady, aged 40 years, was sent to the thoracic department with a history of a cough for four months. Almost total dysphagia had been present for two weeks. The radiograph of the chest was normal. The ESR was 76, a fever of 38°C was present, and the Mantoux test was strongly positive. A single barium swallow resulted in severe coughing and contrast flooded the bronchial tree; a fistulous track was not shown. Oesophagoscopy and bronchoscopy were normal. Eventually barium was injected *via* an oesophageal tube and a connection was demonstrated between the oesophagus and right main bronchus (Fig. 1). The patient was treated with antituberculous drugs and fed by nasogastric tube. The sputum was positive for AFB two weeks later and the fistula had healed in six weeks. It is interesting that another caseous gland had eroded the oesophagus at the thoracic inlet and this was symptomless.

Case 3

In 1979 a healthy male Pakistani, aged 37 years, was referred to the gastroenterological department. He complained of severe epigastric pain, worse on swallowing and associated with dysphagia. The symptoms had been present for nearly three weeks and were getting worse. Radiograph of the chest was normal but barium swallow showed a lobulated extrinsic pressure defect on the right of the oesophagus at subcarinal level (Figs 2 and 3). Oesophagoscopy confirmed the findings and revealed

central mucosal ulceration. The instrument could not be passed beyond the obstruction. All biopsies showed non-specific inflammation. The patient was afebrile, the ESR was 30, and the Mantoux test strongly positive.

Four days later the dysphagia had decreased slightly and re-examination confirmed that the obstruction was less, but by now there was circumferential ulceration at the point of maximum narrowing. The histology was unchanged, but prolonged search revealed an occasional tubercle bacillus. This was confirmed on gastric washings one week later. Antituberculous treatment was started and repeat barium examination six weeks later showed only minor compression present and no signs of stricture.

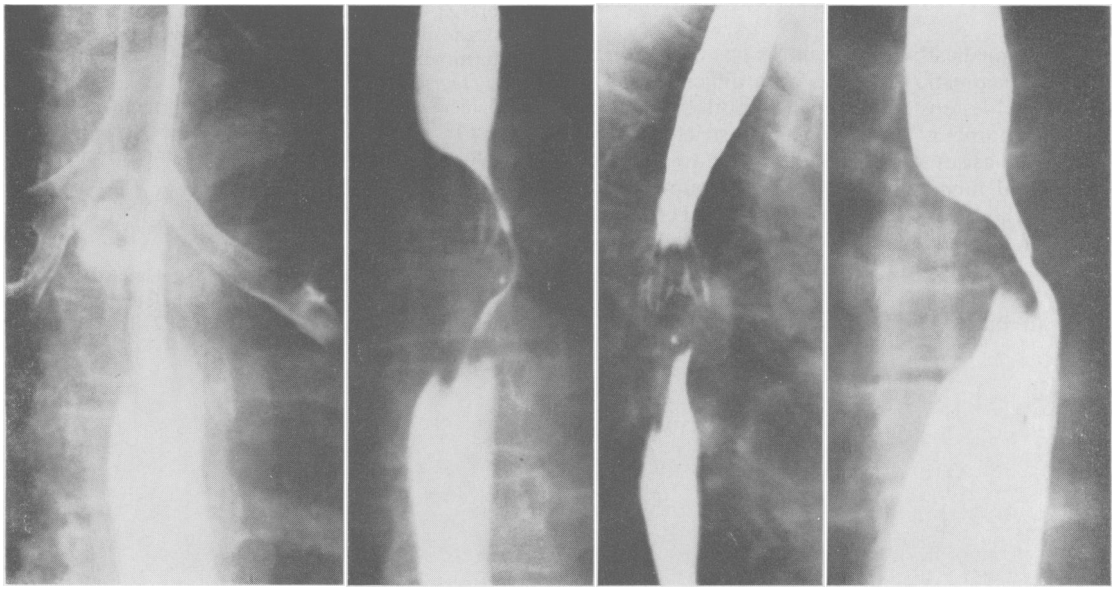
Case 4

Later in 1979 another Asian lady, aged 43 years, attended the surgical outpatient department, complaining of food sticking in her throat. The history was of only three weeks' duration but some weight loss had occurred and malignancy was suspected. The radiograph of the chest showed enlarged right paratracheal glands, there was no fever but the ESR was 32 and the Mantoux test strongly positive. Barium swallow (Fig. 4) was similar to that in case 3 and endoscopy confirmed extrinsic oesophageal pressure at subcarinal level. The mucosa was normal. Although bacteriological proof was not obtained in this patient she responded well to antituberculous treatment: the radiograph of the chest and the swallowing were normal three months later.

Discussion

Oesophageal tuberculosis has been described in advanced lung disease,[3 4] in miliary spread, and with 'primary' childhood infection. Recently there have been reports of lesions in adults with no signs of active disease elsewhere.

Two of our patients showed severe compression from adjacent subcarinal glands. Other such cases have been described.[5–8] These glands may heal without treatment, they may ulcerate into the oesophagus or a fibrous stricture may form; sometimes a fistula occurs. The mucosal stricture in the first patient was not proved to be tuberculous, but it was suspected as the Mantoux test was strongly positive. The dysphagia had been present for a long time; initially it was probably caused by pressure from infected glands, later these may have ulcerated and caused the stricture seen at presentation. Christien *et al.* reported a similar patient whose condition resolved without treatment.[8] The Mantoux test was strongly



1 2 3 4

Fig. 1 *Case 2. Fistula between the oesophagus and right main bronchus.* Fig. 2 *Case 3. Subcarinal compression of oesophagus from right side.* Fig. 3 *Case 3. Lateral view of oesophagus showing mucosal widening and central ulceration.* Fig. 4 *Case 4. Subcarinal compression on right side of oesophagus.*

positive and tuberculosis reappeared at other sites within a year, as in this first case.

Fibrous strictures usually occur in the middle and lower thirds of the oesophagus, biopsy is occasionally helpful[9] but diagnosis is often made only at operation. The stenosis may be associated with adjacent gland infection[9 10] or with a fibrosing mediastinitis.[11] Schneider described a case with multiple strictures and ulceration. Infection had spread to the mediastinum and glands from a reactivated tuberculoma. Diagnosis was made at necropsy.[12]

Fistula formation is rare, most commonly it involves the bronchial tree, usually the right main bronchus. The second case has been described briefly elsewhere, together with other complications of mediastinal tuberculosis.[13] The oesophagus healed without stenosis on medical treatment alone. Caseating glands have caused a fatal fistula between the aorta and oesophagus[14] and another fatal haematemesis occurred when many small paraoesophageal glands eroded the oesophagus and its blood supply.[15] In neither of these cases was the diagnosis suspected.

Lung disease was absent in our four cases, but the Mantoux reaction was strongly positive. Endoscopic histology was not helpful, although the bacillus was seen in one case. Of the 17 reference cases endoscopic histology was positive in five, the results of Mantoux testing were recorded in only six and were strongly positive.

Isolated mediastinal tuberculosis has been seen at all ages. Diagnostic proof has been difficult and the oesophageal lesions have mimicked both benign and malignant tumours and also peptic stricture. This paper emphasises that it is important to consider oesophageal tuberculosis in any age group— particularly in those with subcarinal lesions and especially in the immigrant population, as they show an increased incidence of glandular infection.

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References

[1]Morson CB, Dawson IMP. *Gastro-intestinal pathology*. Oxford: Blackwell, 2nd ed. 1979; p. 23.
[2]Fahmy AR, Guidi R, Farid A. Tuberculosis of the oesophagus. *Thorax* 1969; **24:** 254–6.
[3]Montes I, Larsen E, Haiderer O, Kennedy JH. Tuberculous stricture of the oesophagus:report of a patient successfully treated by colon interposition. *Chest* 1971; **60:** 194–5.
[4]Wexels P. Tuberculosis of the oesophagus. *Acta Tuberc Scand* 1954; **29:** 211–3.
[5]Grosdidier J, Heully F, Gaucher P, Richaume B, Feugler P. Extrinsic compression of the thoracic oesophagus of lymph node origin wrongly considered a benign tumour of the oesophagus. *Sem Hop Paris* 1971; **47:** 1472–3.
[6]Ledoux-Lebard G, Weil J, Sahut D'Izarn, Glikmanas M, Bonnin A, Leger L. Tuberculosis of the oesophagus. *Nouv Presse Med* 1978; **7:** 4037–40.
[7]Ito Y, Kobayashi S, Kasugai T. Tuberculosis of the oesophagus. *Am J Gastroenterol* 1976; **65:** 454–6.
[8]Christien G, Bouche J, Cotonnec C. Two cases of oesophageal compression due to tuberculous lymphadenitis. *Sem Hop Paris* 1972; **48:** 1245–8.
[9]Weimann S, Schargetter H, Riedler L. Oesophageal tuberculosis. *Zentralbl Chir* 1979; **104:** 1072–6.
[10]Eckmann L. Intramural Stenosing tuberculoma of the oesophagus. *Schweiz Med Wochenschr* 1969; **99:** 538–9.
[11]Jezioro Z, Bernat M, Rosinska T, Saferna J. Oesophageal stenosis caused by cicatricial inflammatory tuberous mediastinal lesions following lymph node tuberculosis. *Pol Przegl Chir* 1975; **47:** 393–7.
[12]Schneider R. Tuberculous oesophagitis. *Gastrointest Radiol* 1976; **1:** 143–5.
[13]Bloomberg TJ, Dow CJ. Contemporary mediastinal tuberculosis. *Thorax* 1980; **35:** 392–6.
[14]Hancock BW, Barnett DB. Case of post-primary tuberculosis and massive haematemesis. *Br Med J* 1974; **5933:** 722–3.
[15]Roche JY, Desfemmes F, Coffin JC, Callard P, Patel JC. Oesophageal tuberculosis revealed by massive haemorrhage. *Chirurgie* 1977; **103:** 177–82.