haematobium eggs. A schistosomal antibody test and urine samples for schistosomal eggs were negative. She was treated with praziquantel 40 mg/kg body weight and at three months the cervical lesion had completely resolved. Repeat cervical smear at that time was negative for schistosomal eggs.

Case 2

A man of 31 from Somalia attended after experiencing terminal haematuria for the past twelve months. On routine blood testing the only finding of note was slight eosinophilia. The red cell count in urine was $>100 \times 10^6/L$ but no schistosomal eggs were seen. Plain X-ray screening for sexually transmitted infections was negative and ultrasound of the urinary tract showed nothing abnormal. A schistosomal antibody test was positive at level four. He was treated with praziquantel 40 mg/kg and was free from haematuria one month and six months later.

COMMENT

Most cases of schistosomiasis in the UK are associated with travel to Africa, especially Malawi.¹ The infective agent is a water-borne larva (the cercaria) that penetrates intact human skin in contaminated water. The adult trematode worms reside in mesenteric veins (*S. mansoni* and *S. japonicum*) or in perivesical veins (*S. haematobium*) and produce eggs. Chronic disease results from the host's immune response to the eggs. *S. japonicum* is confined to Asia.

Early symptoms of *S. haematobium* infection are haematuria and dysuria, with genital disease in one-third of affected women.² Vulval and perianal lesions may be hypertrophic, ulcerative, fistulous or wart-like and can facilitate transmission of HIV. Cervical lesions may be cauliflower-like growths, ulcerative or polypoidal. Later features are bladder calcification and cancer, ureteric obstruction and renal failure.

Diagnosis depends on detection of eggs in tissue, urine or faeces. Urine samples should be collected between 12 and 2 pm after the patient has taken light exercise. The shedding of eggs is not constant so repeat samples may be necessary. Cervical disease can be detected by smear or biopsy.^{3,4} Serological diagnosis is by enzyme-linked immunosorbent assay, which is 76% sensitive for *S. haematobium*⁴ but does not become positive for 6–12 weeks after initial infection. A new technique seeks DNA sequences from the parasite. The mainstay of treatment is praziquantel: a single dose of 40 mg/kg gives a cure rate of 60–90%, assessed by examination of faeces or urine one month after treatment.

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Stenting for tracheobronchial stenosis in tuberculosis

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The major cause of acquired benign tracheobronchial stenosis in the UK is prolonged intubation or tracheostomy. Infective causes include tuberculosis (TB).

CASE HISTORY

A recent immigrant from China, age 36, was admitted with weight loss, dyspnoea, stridor and pyrexia. Acid-fast bacilli were identified in his sputum and he was started on antibiotics for tuberculosis (TB). CT scan showed tracheal and right-main-bronchus stenosis. Peak expiratory flow rate (PEFR) was 40 L/min. He deteriorated and rigid bronchoscopy revealed a narrow stricture 10 cm below the vocal cords (Figure 1), which was dilated. He was transferred to our centre shortly after.

A relapsing course followed, and six dilatations were performed over the next three months. To maintain tracheobronchial patency, stenting was undertaken. Under general anaesthesia the trachea was intubated with a rigid bronchoscope. The distance between the vocal cords and the level of obstruction was noted and a silicone Y stent

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Table 1 Characteristics of studies evaluating tuberculous tracheobronchial stenosis

Reference	Country	No.	Site	Treatment	Outcome
Lee (Ref. 2)	Korea	59	LMB (31) Trachea (10) RMB (7) LMB+LLL (3) RMB+BI (3) Trach+RMB (2) Trach+LMB (2) LMB+LUL (1)	101 balloon dilatations in 59 patients (mean no. of sessions per patient 1.7, range 1–4)	Deaths 3 (unrelated) Symptomatic improvement 83% Recurrence 80% 5 stent insertions 2 left pneumonectomies
Lee (Ref. 3)	Korea	19	LMB (19)	Balloon dilatation and metallic stent 19	Immediate improvement 73% Patency rates 64% at 3 years, 42% 6 years Granuloma 1 Fracture of stent 2
Kato (Ref. 4)	Japan	36	LMB (25) RMB (7) RLB (1) Trachea (1) Trachea+RMB+LMB (2)	Bronchoplastic reconstructive surgery 36	Increases in pulmonary function Deaths 3 Anastomotic leak 7 Granuloma 5
Nomori (Ref. 5)	Japan	2	Trachea (1) LMB (1)	Dumon silicone stent 2	Granuloma causing restenosis and requiring removal of stent 2
Wan (Ref. 6)	Hong Kong	7	LMB (5) Mid trachea (1) Trachea+RMB (1)	Dumon silicone stent (11 stents in 7 patients)	Deaths 0 Spontaneous pneumothorax 1 Migration 2 Re-insertion X5 stent in 1 patient
Huang (Ref. 7)	Taiwan	3	Trachea+LMB (2) LMB (1)	Staged dilatations+stent insertion 3	Stent removed and patient remained well 1 Granulation tissue post-removal Stent migration 1
Sawada (Ref. 8)	Japan	5		Gianturco expandable metallic stent after dilatation 5	Restenosis 2, treated by laser ablation Haemoptysis 1

EBTB=endobronchial tuberculosis; LMB=left main bronchus; RMB=right main bronchus; BI=bronchus intermedius; LUL=left upper lobe bronchus; LLL=left lower lobe bronchus

(Hood) was sized and prepared (Figure 1). Bougies were inserted in both main bronchi. After preoxygenation the bronchoscope was removed and the stent was slid over the bougies and its position confirmed on bronchoscopy. Postoperatively the patient did well, and with nebulisers and physiotherapy his PEFr remained above 200 L/min.

Three months later he returned with dyspnoea and stridor. Bronchoscopy revealed intra-stent granuloma and dilatation was performed. A further dilatation was needed one week later; therefore, reconstructive surgery was planned. However, the patient returned to China and we have no information on his subsequent course.

COMMENT

Tracheobronchial stenosis is not a frequent complication of pulmonary TB. It was present, for example, in only 114 (5.9%) of 1938 cases managed in a tertiary centre in

Korea.¹ Factors in pathogenesis include implantation of mycobacteria in the airway from a parenchymal lesion, direct infiltration from an adjacent node, and peribronchial extension through lymphatic drainage or haematogenous spread. Stenosis may arise from extrinsic compression, from a large mural lesion or from excessive inflammatory and fibrous reaction affecting the airway wall. In many cases it will respond to antituberculosis drugs together with steroids to suppress the inflammation; however, additional measures are sometimes needed. We looked at the published experience by searching PubMed and Ovid using the terms 'tracheobronchial stenosis' or 'tracheal stenosis' and 'tuberculosis'. 38 reports were identified, two-thirds of which came from East Asia. 7 were relevant (Table 1). Dilatation seems an effective and safe treatment. Of 59 patients in one series, 83% reported substantial improvement in symptoms.² Complications were few: in a total of 101 dilatations there were two cases of deep mucosal

TRACHEAL
STENOSIS RMB
STENOSIS

Figure 1 Bronchoscopy and coronal CT scan demonstrating tracheal and right main bronchus stenosis

lacerations (both of which had healed at one month), and one of bronchospasm. However recurrence was common: 80% of patients had a primary relapse of airway stenosis and 43% had a secondary relapse. Recurrence is the usual reason for stent insertion. Since retrieval of metallic stents can be difficult, non-metallic stents are preferred for the management of benign disease; they can be left *in situ* for long periods. Complications of stents include migration, granuloma formation and obstruction.⁹ In some cases surgical resection of the stenotic segment together with bronchoplastic reconstruction is a possibility.

With the increasing incidence of TB, UK clinicians need to be sensitive to this cause of stridor, especially in groups at high risk.

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Visual loss after cat scratch

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Visual loss associated with neuroretinitis (optic disc swelling with a macular star) should prompt questions about contact with cats.

CASE HISTORY

A man aged 25 attended the eye casualty clinic after three days of gradually deteriorating visual acuity in the right eye. For the previous two weeks he had experienced flu-like symptoms from which he was now recovering. He owned a kitten which had scratched him on numerous occasions over the past few weeks.

Best corrected visual acuities were 6/18 in the right eye and 6/4 in the left eye. There was no relative afferent pupillary defect and colour vision was normal. Fundoscopy revealed a right swollen optic disc, macular exudates in a star formation and some superficial retinal haemorrhages (Figure 1). There was no other sign of inflammation in the right eye and the left eye appeared normal. Fluorescein angiography showed some late leakage from the right disc. Full blood count, urea, electrolytes, erythrocyte sedimentation rate, serum angiotensin converting factor, cytomegalovirus serology, chest X-ray and CT of the brain and orbits were all either normal or negative. However,

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