asymmetrical distension with a tender tympanic mass occupying the right lower quadrant. Bowel sounds were absent. Plain abdominal radiographs showed the features of acute caecal volvulus.

At laparotomy a 180° anticlockwise rotation of the caecum was found with a gangrenous anterior wall. Diverticular disease of the colon was confirmed, and there was a paracolic abscess around the lower descending and upper sigmoid colon. Subtotal colectomy was carried out with a primary end to end ileorectal anastomosis. Uneventful recovery followed until 37 days post-operatively, when a small faecal fistula developed. This closed over the next 14 days, and she was discharged 55 days postoperatively.

Comment

After colonoscopy some patients complain of an uncomfortable feeling within a slightly distended abdomen, probably due to retained air within the colon. This usually subsides within a few hours. When either the distension or the pain continues for longer we believe that plain abdominal radiography is mandatory to exclude perforation, ileus, or, as in this case, obstruction. In this case plain abdominal radiographs were taken after 24 hours; in retrospect these showed features of caecal volvulus together with some gaseous distension of the more distal colon.

Acute caecal volvulus is an uncommon form of intestinal obstruction, and its occurrence after colonoscopy has not been previously reported. Diagnosis of the condition may present considerable difficulty. Only a quarter of patients present with a tympanic mass in the right lower abdominal quadrant; in the remainder the diagnosis is usually apparent from erect and supine abdominal radiographs¹ but is often missed. Caecal volvulus must therefore be borne in mind, as early treatment may prevent the development of gangrene.

We have little doubt that the aetiology of this patient's caecal volvulus was overinsufflation of air, which is sometimes inevitable when fluid has to be aspirated frequently to maintain a good view. Deflation during withdrawal of the instrument should always be performed but may not be complete in those cases in which only limited colonoscopy has been carried out.

¹ Britton DC, Tregoning D, Bone G, McKelvey STD. Colonoscopy in surgical practice. *Br Med J* 1977;i:149-51.

² Ramakrishnan T. Adynamic ileus complicating colonoscopy. *South Med J* 1979;72:92-3.

³ Rees BI, Williams LA. Incarceration of hernia after colonoscopy. *Lancet* 1977;i:371.

⁴ Anderson JR, Lee D. Acute caecal volvulus. *Br J Surg* 1980;67:39-41.

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Recurrent thymoma with myasthenia gravis

The association of thymoma and myasthenia gravis is well recognised, the incidence of myasthenia in patients with tumour being about 30%.¹ Excision of the tumour usually results in an improvement in the neurological symptoms and is rarely complicated by recurrence.² We describe a patient with histologically proved thymoma who developed myasthenia gravis. After removal of the tumour her myasthenia improved, but with regrowth of the tumour her neurological symptoms deteriorated.

Case report

The patient presented in 1952, aged 22, with a short history of a productive cough. A chest x-ray film showed a right-sided shadow anteriorly in the superior mediastinum. No intervention was carried out at the patient's

request. In 1962 she presented with a seven-month history of bilateral ptosis and progressive tiredness and weakness of the arms, which were worse at the end of the day. Myasthenia gravis was diagnosed. A chest x-ray film showed little change in the mediastinal shadow. At operation a hard thymic tumour was found, adherent to the great veins. The mass was removed en bloc without damage to the vessels. Histology, which was later reviewed, showed a lymphoepithelioma of the thymus. She recovered satisfactorily and required a lower dose of pyridostigmine. When she was seen in 1975 with an unrelated complaint a chest x-ray film was normal.

In 1981, aged 52, she presented with a 12-month history of proximal myopathy of the shoulder and hip girdles and paraesthesia of both hands. Examination disclosed proximal muscle weakness with hyporeflexia, and electromyographic studies suggested a myopathy. Although this was an atypical picture, a raised titre of anticholinesterase antibody suggested myasthenia gravis. The dose of pyridostigmine was increased, and her symptoms improved. A chest x-ray film again showed a mass in the right side of the anterior mediastinum, and computed tomography confirmed it to be homogenous.

At operation via the previous sternotomy an invasive, partly necrotic tumour was found affecting the walls of the great veins, eroding the back of the manubrium and body of the sternum and extending beneath the aortic arch. Attempts to retract the sternum resulted in rupture of the innominate veins with subsequent massive haemorrhage. The tumour was deemed inoperable and biopsy specimens taken. Her postoperative recovery was stormy, and she required treatment for hypokalaemia and left ventricular failure. She eventually received a full course of radiotherapy to the thymus. Subsequently she had slight proximal muscle weakness, but this was controlled with a reducing dose of prednisolone, which replaced the pyridostigmine.

Histology of the biopsy specimens showed a thymoma with mixed epithelial and lymphocyte elements, numerous mitoses, and small foci of calcification. The appearances were considered to be consistent with malignant change.

Comment

The presence of a thymoma for 10 years before the onset of myasthenic symptoms is unusual. Keynes³ suggested that "silent thymomas" represent an inactive phase. Early thymectomy does not prevent the development of myasthenia, as several cases of neuro-muscular dysfunction have been reported after excision of the tumour.¹

The incidence of recurrence of benign thymoma has been estimated to be 2%.² There are no clinical or histological features, however, that suggest a tendency for recurrence. Previously reported recurrences have been benign, and malignant change has not been described. It might be argued that recurrences are second primary tumours arising in ectopic thymic tissue, as islands of such tissue often occur.⁴ In our case, however, despite a long latent period the area affected closely matched that of the original tumour. In addition, a chest x-ray film taken five years previously had been normal, and the aggressive nature of the recurrence suggests that malignant change occurred.

¹ Namba T, Brunner NG, Grob D. Myasthenia gravis in patients with thymoma, with particular reference to onset after thymectomy. *Medicine (Baltimore)* 1978;57:411-33.

² Fechner RE. Recurrence of non-invasive thymomas: four cases and review of the literature. *Cancer* 1969;23:1423-7.

³ Keynes G. Surgery of the thymus gland (second and third thoughts). *Lancet* 1954;i:1197-202.

⁴ Jaretzki A, Bethea M, Wolff M, et al. A rational approach to total thymectomy in the treatment of myasthenia gravis. *Ann Thorac Surg* 1977; 24:120-30.

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Correction

Why patients were lost from follow-up at an urban diabetic clinic

We regret that an error occurred in this paper by I N Scobie and others (15 January, p 189). The haemoglobin A₁ concentrations should have been expressed as % (of total haemoglobin) not as g/dl.