Keywords: jejunoileal diverticulitis; diverticulitis; small bowel perforation; Crohn's disease; enterocolitis

- 1 Wilcox RD, Shatney CH. Surgical implications of jejunal diverticula. *South Med J* 1988;**81**:1386-91.
- 2 Chow DC, Babaian M, Taubin HL. Jejunoileal diverticula. *Gastroenterologist* 1997;**5**:78-84.
- 3 Benson RE, Dixon CF, Waugh JM. NonMeckelian diverticula of the jejunum and ileum. *Ann Surg* 1943;**118**:377-93.
- 4 Akhrass R, Yaffe MB, Fischer C, Ponsky J, Shuck JM. Small-bowel diverticulosis: perceptions and reality. *J Am Coll Surg* 1997;**184**:383-8.
- 5 Krishnamurthy S, Kelly MM, Rohrmann CA, Schuffler MD. Jejunal diverticulosis: a heterogeneous disorder caused by a variety of abnormalities of smooth muscle or myenteric plexus. *Gastroenterology* 1983;**85**:538-47.
- 6 Longo WE, Vernava AM. Clinical implications of jejunoileal diverticular disease. *Dis Colon Rectum* 1992;**35**:381-8.
- 7 Nobles E. Jejunal diverticula. *Arch Surg* 1971;**102**:172-4.
- 8 Maglinte D, Chernish S, DeWeese R. Acquired jejunoileal diverticular disease: subject review. *Radiology* 1986;**158**:577-80.
- 9 Greenstein S, Jones B, Fishman EK, Cameron JL, Siegelman SS. Small bowel diverticulitis: CT findings. *AJR* 1986;**147**:271-4.
- 10 Tsiotos GG, Farnell MB, Ilstrup DM. Nonmeckelian jejunal or ileal diverticulosis: an analysis of 112 cases. *Surgery* 1994;**116**:726-32.

Multinodular goitre, dysphagia and nodular shadows in the lung

A Bhansali, S Bhadada, R Kochhar, R Muralidharan, R J Dash

A 41-year-old woman presented in December 1997 with dry cough with streaky haemoptysis of 15 days duration. She had had a goitre for the last 25 years and had been diagnosed as having thyrotoxicosis on clinical and biochemical grounds (triiodothyronine (T_3) 2.8 ng/ml and thyroxine (T_4) 220 ng/ml) in September 1995. She had received carbimazole for 6 months and remained asymptomatic thereafter.

On examination, her body mass index (BMI) was 24.1 kg/m². She had no pallor, lymphadenopathy, clubbing, oedema or hyperkeratosis. Her pulse was 96 beats/min regular, blood pressure 110/70 mmHg. She denied a history of fever, weight loss, loss of appetite, or recent increase in goitre size, but had been dysphagic to solids for 2-3 days. She was a non-smoker and never consumed alcohol. She had a firm, grade III (WHO) non-tender multinodular goitre with retrosternal extension. Systemic examinations were normal except for diffuse bilateral rhonchi. Her haemogram and serum biochemistry, including thyroid hormone profile (T_3 0.86 ng/ml, T_4 78 ng/ml, thyroid-stimulating hormone 0.3 μ U/ml) were normal. Ultrasonography of thyroid confirmed the multinodular goitre with retrosternal extension with some areas of necrosis and specks of calcification. Ultrasound-guided fine needle aspiration cytology (FNAC) revealed follicular cells with nuclear grooving and psammoma bodies. Her radiological profile is shown in figure 1. Bronchoscopy could not be completed because of laryngeal spasm. Computed tomography (CT)-guided FNAC from pulmonary lesions was inconclusive.

Postgraduate Institute
of Medical Education
and Research,
Chandigarh 160012,
India
Department of
Endocrinology
A Bhansali
S Bhadada
R Muralidharan
R J Dash
Department of
Gastroenterology
R Kochhar

Correspondence to Prof
R J Dash

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Figure 1 Clinical and radiological profile of the patient

Questions

- 1 What is shown in figure 1?
- 2 What is your diagnosis?
- 3 What would be the approach to confirm the diagnosis?

Answers

QUESTION 1

Figure 1 shows bilateral multiple nodular opacities in lung fields on chest X-ray, further substantiated on high-resolution CT. Cervical X-ray shows a large goitre with retrosternal extension and calcification.

QUESTION 2

With the available clinical and radiological profile, a diagnosis of euthyroid multinodular goitre with retrosternal extension and metastatic lesions in the lung can be made. Further work-up to determine the primary source, whether from thyroid or elsewhere, is required.

In the presence of a long-standing euthyroid goitre, the possibility of thyroid carcinoma with pulmonary metastases is high. However, multinodularity and absence of cervical lymphadenopathy in the face of pulmonary metastases decreases this probability.¹ The presence of nuclear grooving and psammoma bodies can also be seen in long-standing multinodular goitre.^{2,3}

QUESTION 3

The clue to the primary site of malignancy came from the widening of the prevertebral space in the cricopharyngeal region and the presence of malignant keratinizing squamous cells in the sputum. Barium swallow showed a narrowed segment with irregular mucosa in the upper third of the oesophagus (figure 2). Fibre-optic endoscopy revealed a growth in the upper cervical oesophagus. Brush cytology smears from the growth confirmed squamous cell carcinoma. Her disease was classified as stage IV (any T, any N & M1) according to the TNM staging system. She received cisplatin and etoposide cyclically (3 days treatment at 4-week intervals) and palliative radiation therapy.

Figure 2 Barium study showing a narrowed segment with irregular mucosa in the upper third of the oesophagus

Learning points

- when metastatic pulmonary lesions are seen in a patient with long-standing euthyroid nodular goitre without enlarged lymph nodes in the neck, a non-thyroidal primary source needs to be considered
- nuclear grooving and psammoma bodies, which are considered a cytological hallmark of papillary carcinoma, can also be present in long-standing multinodular goitre
- upper oesophageal carcinoma with lung metastases may present with subtle symptomatology

Discussion

Patients with oesophageal carcinoma with metastatic disease usually present with dysphagia, odynophagia, weight loss and marked emaciation.⁴ Our patient had maintained reasonably good health (BMI 24.1 kg/m², haemoglobin 10.6 g/dl) at presentation. She experienced transient dysphagia to solids, attributable to compression from the multinodular goitre. Dysphagia, however, is not a presenting manifestation of upper cervical oesophageal carcinoma as this segment of the oesophagus is capacious.

Squamous cell carcinoma of the oesophagus, oropharyngeal leucoplakia and palmo-plantar tylosis are genetically linked. However, except for a positive family history of dysphagia in two of her first degree relatives, there were no indications for this syndrome in our patient.⁵ The relative frequencies of squamous cell carcinoma in the upper, middle and lower portions of oesophagus are 17%, 55% and 33%, respectively. Based on gross appearance, the fungating variety accounts for 60%, ulcerative type 25%, and infiltrative type 15%.⁵

Chronic cough in squamous cell carcinoma of the oesophagus occurs due to aspiration, tracheo-oesophageal fistula, or pulmonary metastases. In view of ready access to blood vessels, haematogenous metastases to lungs, liver, kidneys and bone are common.⁵

Chemotherapy combined with palliative radiation yields better results than radiation therapy alone in patients with localised carcinoma of the oesophagus.⁵ Only about 20% of lesions are resectable but surgical intervention does not lead to increased survival except when the lymph nodes are not involved. The overall prognosis is poor, with 5-year survival rate less than 5%.⁵

Final diagnosis

Euthyroid multinodular goitre and squamous cell carcinoma of oesophagus with pulmonary metastases.

Keywords: multinodular goitre; squamous cell carcinoma; oesophageal carcinoma; pulmonary metastases

- 1 De Groot LJ, Kaplan EL, McCormick M, Straus FH. Natural history, treatment and course of papillary thyroid carcinoma. *J Clin Endocrinol Metab* 1990;1:414–24.
- 2 Gould E, Watzak L, Chamizo W, Saavedra JA. Nuclear grooves in cytologic preparations: a study of the utility of this feature in the diagnosis of papillary carcinoma. *Acta Cytol* 1989;33:16–20.
- 3 Klinck GH, Winship T. Psammoma bodies and thyroid carcinoma. *Cancer* 1959;12:656–9.
- 4 Krevsky B. Tumors of the esophagus. In: Haubrich WS, Schaffner F, Berk JE, eds, *Bockus Gastroenterology*. Philadelphia: WB Saunders, 1995; pp 534–57.
- 5 Gore RM. Esophageal cancer: clinical and pathologic features. *Radiol Clin North Am* 1997;35:243–63.

An unusual cause of dysphagia

Israel Gotsman, Paul Mogle, Michael Y Shapira

A 74-year-old woman was referred for evaluation of dysphagia and weight loss. She had a history of dysphagia for solid foods, which had become worse over the past year. She had lost 5 kg in weight but her appetite was good. She suffered from mild heartburn without pain and her bowel movements were normal. Gastroscopy showed mild gastritis with a positive culture for *Helicobacter pylori*. A short course of triple antibiotic therapy and omeprazole was prescribed. Follow-up endoscopy appeared normal. Her heartburn improved but the dysphagia persisted.

She had had a myocardial infarction 4 years earlier, complicated by acute mitral regurgitation due to papillary muscle rupture. This was repaired by urgent surgery. A post-operative echocardiogram showed slight left ventricular enlargement with decreased global function and moderate mitral regurgitation. She was treated with frusemide and digoxin and had minimal complaints of heart failure. She also suffered from type II diabetes and hypertension controlled by atenolol.

Physical examination revealed a thin woman with normal vital signs. The thyroid and lymph nodes were not enlarged. Heart sounds were normal with a 3/6 blowing systolic murmur at the apex radiating to the axilla. Breath sounds were reduced at the base of the right lung. The abdomen was mildly distended but not tender. The liver and spleen were not enlarged, peristalsis was normal. There was mild oedema of both legs. Peripheral pulses were present. Laboratory studies showed mild elevation of alkaline phosphatase and γ -glutamyl transpeptidase. Albumin and cholesterol levels were normal. Haemoglobin was 14.5 g/dl. Electrocardiogram showed sinus rhythm with a non-specific intraventricular block. Chest X-ray (figure 1) demonstrated an enlarged cardiac silhouette with a small right pleural effusion.

Questions

- 1 What is evident on the lateral chest X-ray that may explain the dysphagia?
- 2 What further examinations should be made in order to make a diagnosis?

Hadassah University
Hospital, Hebrew
University–Hadassah
Medical School, PO
Box 12000, Jerusalem,
Israel 91120
Division of Medicine
I Gotsman
M Y Shapira
Department of
Radiology
P Mogle

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Figure 1 Lateral chest X-ray