Improving surgical resection rates in lung cancer without a two stop service

In 1998 the Papworth Thoracic Oncology Unit published their data from the first year of a two stop clinic. By this means they improved their surgical resection rates for patients with non-small cell lung cancer (NSCLC) from 10% to 25%. This paper is quoted as the benchmark for surgical resection in the UK. In 1998 the surgical resection rate for patients with NSCLC in Hammersmith Hospitals Trust was 4.7% (three of 64 patients). In March 2000 we set up rapid access clinics to assess both patients with abnormal chest radiographs and urgent GP referrals. In accordance with the National Service Framework (NSF), multidisciplinary team meetings (MDTM) between respiratory medicine, cardiac/thoracic surgery, oncology and palliative medicine were established.

From April 2000 inpatients and outpatients with a chest radiograph suspicious for lung cancer were referred directly from radiology to one of two rapid access clinics within the Trust. Local GPs, outpatient departments, and the emergency department also referred patients. There were no tertiary referrals. All patients were given appointments within the 2 week time period required by the NSF.

Patients were told they were being investigated for an abnormal radiograph and would need further investigation with a CT scan and may require a bronchoscopy (FOB) and/or fine needle aspiration/biopsy (FNAB). Written information was given at that point regarding CT scanning, FOB, and FNAB. Staging and tissue diagnosis was completed within 2 weeks.

All results were reviewed in the MDTM and management plans were made and recorded. Following the MDTM, patients were reviewed in a joint clinic with the Macmillan nurse and introduced to either the oncologist or the thoracic surgeon. All data on every aspect of the patient’s management were collected prospectively.

From 1 April 2000 to 31 March 2001 194 patients were seen (118 men). In 100 patients cancer was the most likely diagnosis (56 men and 44 women, mean age 67 years, range 26–95). Six patients declined further investigation. 94 (95%) patients had a definite histological diagnosis: 84 primary lung cancers, three secondary lung cancers, two carcinoid tumours, two Hodgkin’s disease, and three mesothelioma.

Of the 84 patients with lung cancer, 14 had small cell carcinoma and 70 had NSCLC. Of the 70 patients with NSCLC, 20 (28.5%) were referred for thoracotomy (11 men, mean age 64 years, range 48–81). Nineteen patients (27% of NSCLC; 23% of the whole cohort) had a successful resection, 17 lobectomies (stages Ia, Ib, IIIa, IIIb and IIIa) and two pneumonectomies (stages IIb and Ia). One patient (5%) had a failed thoracotomy due to a cardiac event. In five cases (all Ia) the chest radiograph had been taken routinely before another operative procedure and three (Ia and IIa) were routine outpatient radiographs in asymptomatic patients. There were no postoperative deaths. Two patients (pIIa) subsequently died at 9 and 11 months, respectively. Currently, the 1 year survival rate for the whole cohort of patients with proven lung cancer is 46%.

With no additional resources we have successfully implemented the lung cancer NSF and have significantly improved our surgical resection rates from 4.7% in 1998 to 27% of patients with NSCLC and 23% of our whole lung cancer cohort. This is equivalent to the benchmark series for surgical resection in the UK but, unlike that series, none of our patients were tertiary referrals.1 Our large increase in resection rate was not due to a more aggressive surgical approach as 80% of the cases were stage Iib or better and our failed thoracotomy rate of 5% is similar to other series.2

We have shown that, without the resources to establish a two stop service we have still established a rapid and effective patient pathway culminating in MDTM and joint clinic. This has produced resection rates considerably better than those previously achieved and a 1 year survival rate that compares very favourably with published UK survival figures.3

E F Bowen, J R Anderson, M E Roddie
Hammersmith & Charing Cross Hospitals NHS Trust, Du Cane Road, London W12 0HN, UK; fbowen@hhnt.org

References

Successful treatment of BALT lymphoma with combined chemotherapy

Primary pulmonary lymphoma arising from mucosa- or bronchi-associated lymphoid tissue (MALT or BALT) is a MALT lymphoma.

We report a 30 year old man with low grade B cell BALT lymphoma who presented with a bulky mass in the lung and was treated successfully with cyclophosphamide, doxorubicin, vincristine and prednisone (CHOP) combined chemotherapy.

References

Authors’ reply

We would like to thank Dr Jalba for the thoughtful comments on our paper. As the prevalence of atypical mycobacterial infection was not systematically evaluated in the studies we reviewed, we could not integrate this into our analysis. From a practical point of view both BCG and non-BCG groups are likely to have similar exposures to atypical infection, and clinicians would not be able to assess routinely for such infections. Similarly, information on nutrition was not systematically available but, as a surrogate, we have looked at the impact of BCG as one moves further from the equator and found no differences in its impact. On the basis that malnutrition would not a significant factor in the sample size we reviewed, this suggests that nutrition is not a significant factor in the sample size we have generated.
The patient was admitted with a dry cough, shortness of breath, back pain, and progressive infiltrates on chest radiographs. He had no history of risks for BALT lymphoma. No rash or lymphadenopathy or organomegaly was detected. A CT scan of the chest showed a right mid lung bulky mass with a diameter of 10.9 × 10.6 cm and infiltrations in both lung fields (fig 1). A transbronchial biopsy specimen was compatible with low grade (B cell lymphoplasmocytoid type) lymphoma. Immunohistochemical examination showed a monoclonal membrane surface k light chain positive. The patient underwent combined chemotherapy (CHOP) which was repeated every 3 weeks. He tolerated the treatment without difficulty, his symptoms improved, and CT scans after completion of six courses of treatment showed a marked reduction in the lesions in both lung fields (fig 2). BALT lymphoma shows an indolent course and remains localised for a prolonged period of time, with systemic dissemination occurring late in the clinical course. Recommended treatment options include complete surgical resection, radiotherapy, or chemotherapy. The role of surgery in the management of primary lymphoma of the lung is twofold: (1) to obtain diagnostic tissue and (2) to obtain a therapeutic resection. In our case we used combined chemotherapy because surgical intervention is of limited use in patients with a large non-resectable lesion or bilateral lung disease.

We conclude that, in patients with a large or bilateral pulmonary BALT lymphoma, transbronchial or transthoracic biopsy and mediastinoscopy are useful diagnostic procedures for obtaining a definitive diagnosis and treatment with combined chemotherapy should be considered.

R Ali, F Özkałemkas, T Özçelik, V Özkocaman, Ü Ozan, A Tunali
Division of Hematology, Department of Internal Medicine, Uludag University School of Medicine, Bursa, Turkey

G Filiz
Department of Pathology, Uludag University School of Medicine

O Gözü
Department of Chest and Tuberculosis, Uludag University School of Medicine

Correspondence to: Associate Professor R Ali, Uludag Universitesi Tip Fakultesi Hematoloji Bolumu, 16059 Gurukli, Bursa, Turkey; rдавать@uludag.edu.tr

References

Obstructive sleep apnoea can directly cause death
A 52 year old woman was referred for investigation of daytime sleepiness. She complained of heavy snoring, unrefreshing disturbed sleep, and had fallen asleep while driving. She had an Epworth score of 24/25, a history of hypertension controlled on losartan, had never smoked, and only took occasional alcohol. She had limited mobility as a result of her extreme obesity (168 kg) with a height of 1.58 m (BMI 67.3 kg/m²). Her chest was clinically clear (FEV₁, 1.81, FVC 2.3 l) and her serum bicarbonate level was 31 mmol/l, implying a degree of hypercapnia. She had a trace of oedema but no evidence of cardiac failure.

She was admitted 1 month later for a sleep study. Data collection included obstructive apnoea, arousal, sleep efficiency, pulse rate, movement and sound (SSI Visilab). At 04.30 hours the nursing staff found her lying dead across the bed. The oxygen saturation by pulse oximetry was 91% at the start of the night in a sitting position. Good data were obtained for the first 25 minutes of the study, the remaining being highly fragmented with values fluctuating between 90% and the instrument cut off level of 25%. The video showed a repeated but irregular pattern of apnoea, snoring, arousal, sitting up, falling asleep, and lying back into the supine position. From one such apnoea she failed to rouse sufficiently to resume breathing and suffered a cardiorespiratory arrest. Postmortem examination showed some coronary atheroma but, crucially, no occlusion, leading to the conclusion that the death was directly attributable to obstructive sleep apnoea (OSA). Lungs, liver and spleen showed some congestion consistent with the post mortem diagnosis of acute cardiorespiratory failure.

The coroner initially expressed concern that the patient was not being directly observed. After discussion it was accepted that a sleep test is not monitoring in the usual sense but is an exercise in data collection performed either in hospital or at home for reasons of organisational convenience.

This recorded death directly resulting from OSA in combination with severe obesity is unlikely to be unique and may be unusual only in that it was captured on the video recording. In such extreme cases recognising the component of OSA may be difficult as the oximetry recording is erratic rather than the familiar “saw tooth” waveform. A number of mechanisms associating OSA with increased morbidity and mortality have been proposed, significantly obesity and ventilatory failure and vascular disease. However, this case demonstrates a causal connection. Attributing unexpected deaths to cardiac events rather than to OSA may conceal a number of deaths directly caused by OSA.

S Pearce
University Hospital of North Durham, Durham DH1 5TW, UK; s.pearce@ncl.northy.nhs.uk

P Sanders
Regional Medical Physics Department, University Hospital of North Durham, Durham DH1 5TW, UK

References