

TEMPORARY SPONTANEOUS REGRESSION OF LUNG CANCER

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SYNOPSIS

A case of temporary spontaneous regression of a lung cancer is reported. This unique phenomenon has not been described previously.

INTRODUCTION

This report describes a patient with a lung cancer and a carcinoma of the colon, characterised by a remarkable behaviour of the former lesion — that of temporary spontaneous regression.

CASE REPORT

A 70 year old man was first admitted to hospital in February 1979 with severe retrosternal chest pain. There was no past history of note except he was a heavy cigarette smoker. He was found to have suffered an acute anterior myocardial infarct. His physical condition was satisfactory. The chest was clear and except for premature ventricular contractions, there were no abnormalities on physical examination. He was given lignocaine, pentazocine and diazepam. He improved with treatment, remained afebrile and was discharged two weeks later. His chest radiograph on admission showed a 1.5 cm round opacity in the left lower zone (Figure 1). He remained well as an outpatient. A radiograph in April 1979 showed no change in size of the opacity which was situated in the left lower lobe (Figure 2a & b). He refused a thoracotomy. A follow-up radiograph in September 1979 showed complete disappearance of the lesion (Figure 3).

In December 1979 he presented with symptoms of colicky abdominal pain and melaena. Investigations

revealed a carcinoma involving the splenic flexure of the colon. A chest radiograph showed a re-appearance of the round opacity at the original site. A transverse colectomy was done in March 1980 (as he had earlier refused a laparotomy) at which time the lung lesion had almost doubled its size (Figure 4).

Histology of the resected colonic lesion showed a well differentiated mucin producing adenocarcinoma (Figure 6). He remained well until June 1981 when he complained of cough productive of some yellowish sputum. Clinically there were signs of a small left pleural effusion. Thoracocentesis revealed a blood-stained fluid in which malignant cells were detected. Bronchoscopy showed a hemorrhagic tumour mass almost completely occluding the lumen of the left lower lobe bronchus. Biopsy of the tumour was reported as showing an undifferentiated mucin negative malignant tumour (Figure 7). He subsequently developed metastases in his left inguinal nodes and right iliac bone and died in April 1982.

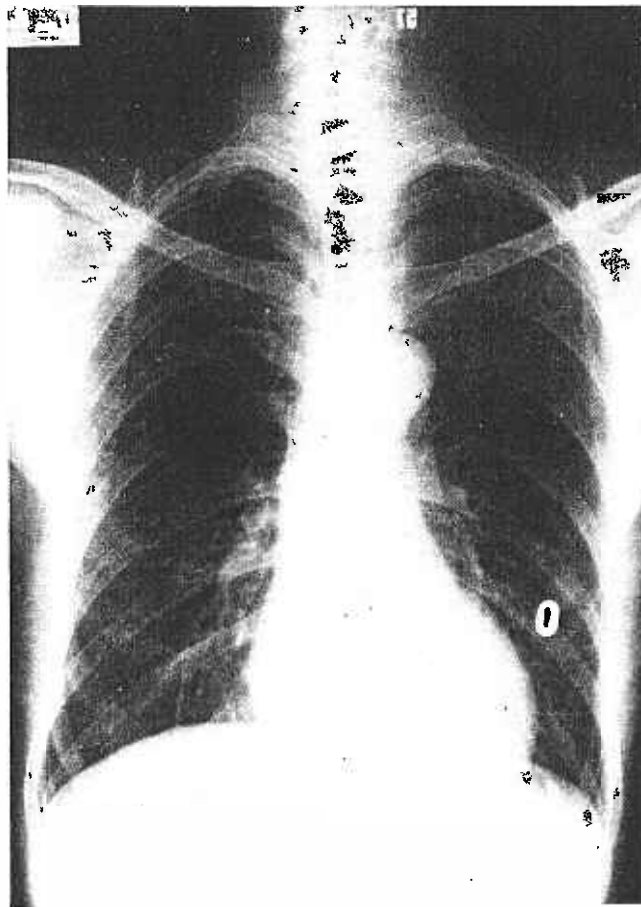


Fig. 1 Chest radiograph on 16th February 1979 showing a 1.5 cm opacity in the left lower zone.

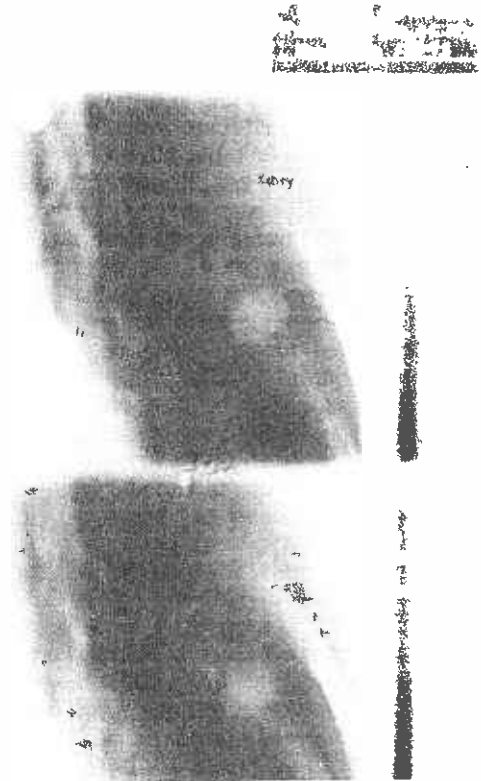
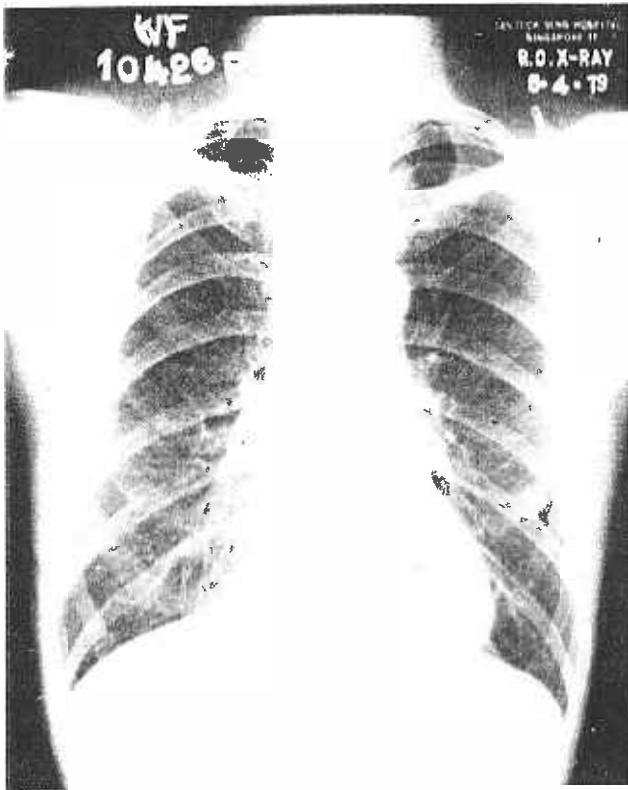


Fig. 2a/b Radiograph on 5th April 1979 and tomogram on 19th May 1979 showing the 'coin' lesion in the left lower lobe.

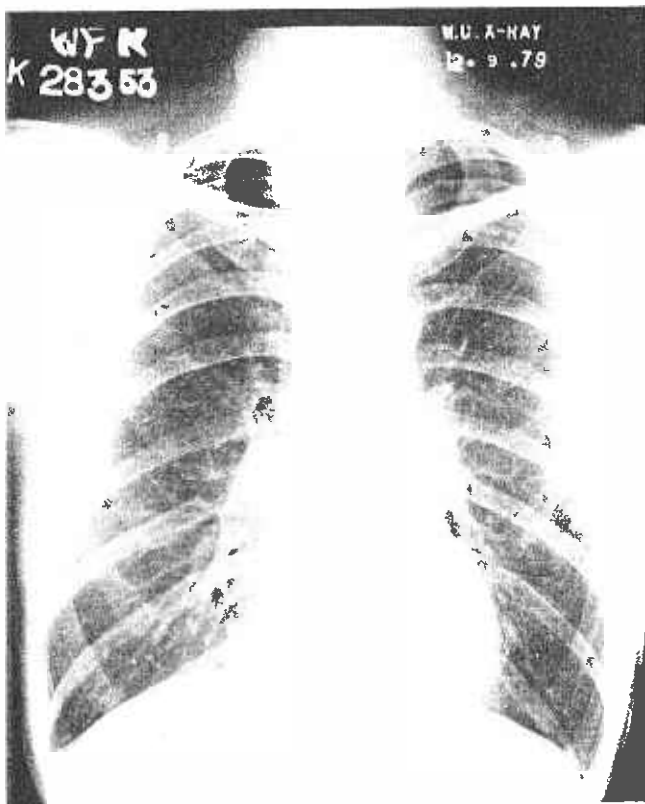


Fig. 3 Radiograph on 12th September 1979 — note disappearance of the lesion.

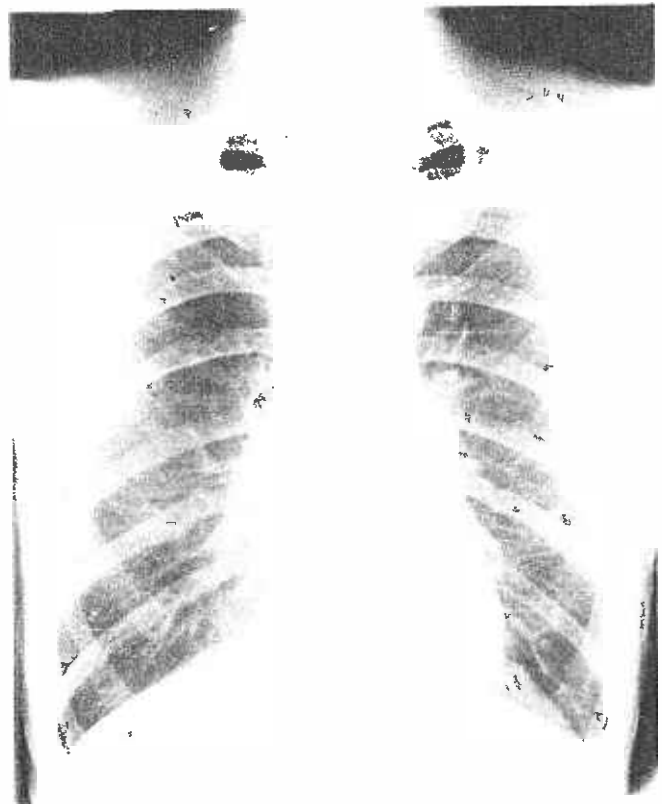


Fig. 4 Radiograph on 3rd March 1980 showing re-appearance of the 'coin' lesion at the same site.



Fig. 5 Radiograph on 5th January 1981 — there is a marked increase in the size of the lesion.

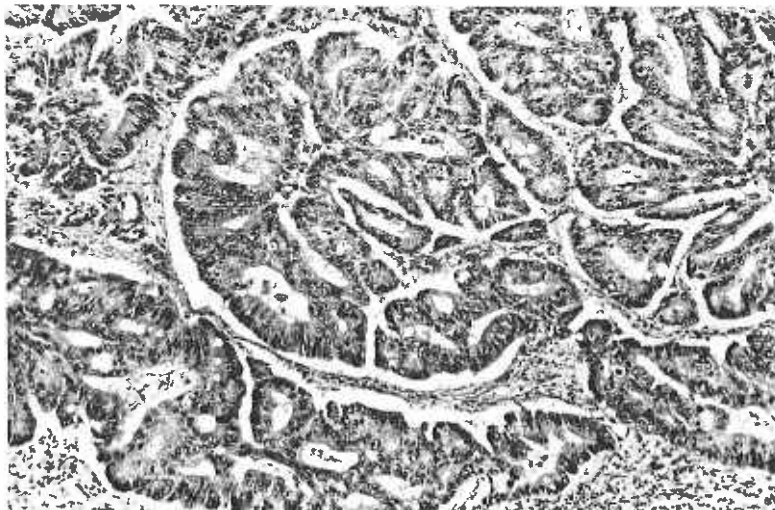


Fig. 6 Histology of the colonic tumour showing a well differentiated adenocarcinoma (X 25). H & E Stain.

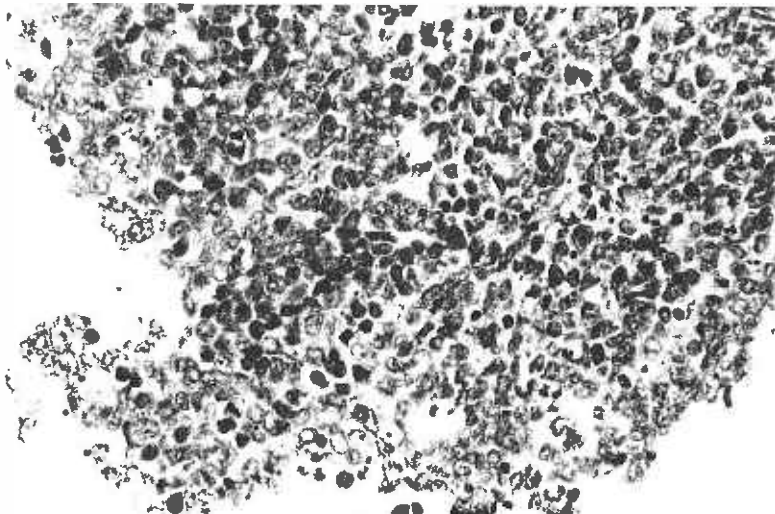


Fig. 7 Bronchoscopic biopsy — undifferentiated malignant tumour (X 100) H & E Stain.

DISCUSSION

Spontaneous regression of malignant disease is an extremely rare phenomenon. In a review of the world medical literature from 1900 to 1965 and many personal communications, Everson and Cole (1) found only 176 cases of spontaneous regression of cancer which they defined as the "partial or complete disappearance of a malignant tumour in the absence of all treatment or in the presence of therapy which is considered inadequate to exert a significant influence on neoplastic disease". Over 50 per cent of the cases occurred in four types of cancer — hypernephroma, neuroblastoma, malignant melanoma and chorion carcinoma.

So far only six cases of spontaneous regression of lung cancer have been described in the literature. In 1954, Blades and McCorkle (2) reported a 54 year old man with an epidermoid carcinoma. Thoracotomy revealed an unresectable carcinoma involving the right hilum and mediastinum. The chest was closed and no treatment was given. The diagnosis was confirmed by biopsy but chest radiographs showed progressive clearing of the pulmonary lesion which ultimately disappeared and was not present on radiographs taken five years later.

A 63 year old man with a right hilar nodular mass on his chest radiograph was reported by Emerson et al (3) in 1968. A right thoracotomy revealed an inoperable highly anaplastic bronchogenic carcinoma involving the right hilum and right upper lobe bronchus. No treatment was given. A chest radiograph taken nine years after operation revealed no evidence of the previous hilar mass. He died of adenocarcinoma of the pancreas 12 years after the initial diagnosis. Autopsy showed no residual lung cancer.

The case of a 64 year old woman with spontaneous regression of an oat cell carcinoma of bronchus was reported in 1970 by Sutton and Pratt-Johnson (4). The chest radiograph showed right hilar enlargement that on bronchoscopic biopsy proved to be oat cell carcinoma of the right upper lobe bronchus. An area of rarefaction considered to be due to a metastatic deposit was found in the head of the left humerus, and was irradiated with a total of 2500 rads. The primary tumour was not treated and was estimated to have received by scattered irradiation only 3.9 rads. A chest radiograph performed three months after diagnosis showed disappearance of the right hilar shadow and bronchoscopy revealed a normal right upper lobe bronchus and segmental divisions.

In 1971, Gautam (5) described a 53 year old man with a moderately well differentiated squamous cell carcinoma involving the carina between the left upper and lower lobe bronchi, proved by biopsy, which subsequently disappeared spontaneously. However, a poorly differentiated squamous cell carcinoma of the right upper lobe bronchus developed three years later.

Dahl et al (6) who described a 59 year old man with a moderately well differentiated squamous cell carcinoma involving the left lower lobe, quoted one other case of spontaneous regression of lung cancer reported by Lenstrup (7). There was also a polypoid tumour with similar histology, on bronchoscopic biopsy, involving the posterior segmental bronchus of the right upper lobe. This tumour regressed spontaneously following a left pneumonectomy. The patient died from widespread metastases 40 months after the first discovery of the cancer.

The waning and waxing behaviour of the tumour in the patient reported here has not been documented before. Although pyrexia has been implicated as one of the factors influencing spontaneous regression of neoplasms (8), our patient did not experience any febrile episodes during his illness. Neither has any of the drugs which were used during his treatment for myocardial infarction been reported to have any effect on tumour growth. Biological control exerted by the host appears to influence the behaviour of the malignant process — from complete tumour regression to holding metastases stationary for a prolonged period (9). Perhaps in the patient reported here this control became ineffective with the simultaneous progression of the colonic neoplasm.

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