Advanced right lung adenocarcinoma invading left atrium and left ventricle via right superior pulmonary vein and partially occluding mitral valve in diastole

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We present a challenging yet interesting case of a 51-year-old lady who presented with dry cough and night sweats. Computed tomographic (CT) scan showed an advanced tumour of right upper lobe of the lung invading heart. Transoesophageal echocardiography confirmed a tumour tracking via right superior pulmonary vein into left atrium and then through mitral valve in diastole into left ventricle partially occluding mitral valve. Transoesophageal echocardiography ruled out any attachment of the tumour to any part of heart. There was no evidence of any distant metastasis on positron emission tomographic scan.

Patient underwent excision of left atrial extension of tumour on bypass via median sternotomy. Immediately afterwards right pneumonectomy was performed via posterolateral thoracotomy. This tumour was moderately differentiated adenocarcinoma and it was staged pT4N2 (Stage 3b) (6th Edition of the AJCC).

Post-operatively she received four cycles of cisplatin- and vinorelbine-based chemotherapy. A year and half after her operation patient is doing very well. A follow-up CT scan at 18 months post-operatively shows no signs of any recurrent disease or distant metastasis.

Conclusion

We conclude that if carefully evaluated in selected patients with lung tumours having polypoidal extension into the left atrium and left ventricle with no attachment or invasion of endocardium or heart valves need not be considered an absolute contraindication to surgical resection. In fact, in highly selected patients, pneumonectomy with retrieval of tumour from left atrium on bypass can provide excellent control of the disease, and even may lead to a definitive cure.

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