Intrathoracic Schwannoma Presenting with Massive Haemoptysis

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A 65-year-old female had presented with two episodes of massive haemoptysis. She also gave a history of heaviness on the right chest for last one year with out cough, expectoration, chest pain or any other symptom. Her past, personal and family history was non-contributory. After admission, the patient was resuscitated. Examination revealed dull percussion note on right mid chest wall with diminished breath sound, with out any mediastinal shift. Rest of the examination was unrevealing.

Chest X-Ray showed a rounded homogenous opacity continuous with the mediastinum and extending into the right middle lung zone (Figure 1). Computed tomography (CT) scan of thorax showed a large (8 × 7 × 7 cms.) well-circumscribed, heterogeneously-enhancing rounded mass in the right posterior mediastinum with partial reduction in right middle lobe posterior segment volume (Figure 2). There were areas of necrosis and scattered nodular calcification inside the mass, and the surrounding bronchi were encircled by it. Complete excision of the well-encapsulated mass was achieved through the right postero-lateral thoracotomy (Figure 3). Histopathological examination of the excised tumor and immunohistochemical positivity for S100 confirmed the diagnosis of schwannoma. Post-resection, the patient returned to her normal life and recovered gradually through regular chest physiotherapy.

Schwannomas (also known as neurilemmomas or neurinomas) are highly vascular nerve sheath tumors that arise from the neural crest-derived schwann cells. Most are benign; however, malignant counterparts exist. Neurogenic tumors comprise 15–25% of primary mediastinal tumors and less than half of these tumors are schwannomas.¹

Most of the intrathoracic schwannomas are asymptomatic, being incidentally detected during routine radiography. Otherwise it can cause cough, dyspnoea, chest pain, neck swelling, Horner’s syndrome, superior vena cava syndrome and features of myelopathy depending on the extent of compression of the adjacent structures. Massive haemoptysis is a very rare presentation and is attributed to inflammatory changes in the surrounding lung parenchyma leading to bronchiectasis or rupture into adjacent bronchi.²

Cross sectional imaging allows precise identification of the extent of involvement of the tumor. Definitive diagnosis requires histologic examination with immunohistochemistry.

In our case, the patient was harboring this schwannoma for a long time with minimal symptoms and ultimately presented with massive haemoptysis. There was no intraspinal extension which is a common occurrence in posterior mediastinal tumors. Rather this highly vascular tumor extended into the lung field and ruptured in to the adjacent bronchi to produce haemoptysis.

References


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Received: 17.05.2010; Accepted: 11.01.2011