CHAPTER 25

NEUROGENIC TUMORS OF THE MEDIASTINUM

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Mediastinal lesions are uncommon and usually neurogenic in origin, located almost in the posterior mediastinum. Their special location is generally paravertebral sulci. Thymomas (27.8%), benign mediastinal cysts (20.0%), and lymphomas (16.1%) were most common. The distribution of lesions varied among mediastinal compartments; thymomas (38.3%), benign cysts (16.8%), and neurogenic tumors (53.9%) were the most common lesions in the prevascular, visceral, and paravertebral mediastinum. The relative incidence of the various cell types and their corresponding risk of malignancy are strongly correlated with age. Children and young are having more tumors of the autonomic ganglia, two thirds of which are malignant. In adults, tumors arising from nerve sheath show vast majority and are with benign nature. These lesions differed by continent or country, with benign cysts being the most common mediastinal lesions in the People's Republic of China, thymomas in Europe, and lymphomas in North America and Israel. Benign cysts, thymic carcinomas, and metastases were more often seen in larger hospitals, whereas lymphomas and thymic hyperplasia occurred more often in smaller hospitals (1).

For malignant mediastinal masses of children, lymphoma was most common diagnosis (66.0%) following neuroblastoma (10.7%), germ-cell tumour (5.4%) and T-cell acute lymphoblastic leukaemia (17.9%). Intensive care unit (ICU) admission ratio may be 37.5%. Factors that are significantly associated with ICU admission are stridor, pericardial effusion and need for pleural drainage. Almost all patients (98.2%) were symptomatic on presentation, of which lymphadenopathy was the most common (69.6%) (2, 3). Within the mediastinal masses, neurogenic tumors have a relatively high number. Distrubition of diagnosis was neurogenic tumour 52%; tymic tumour 20%; teratoma 14% and lymphoma14%. For cystic group 66% broncogenic cyst; 17% pericardial cyst and 7% hydatic cyst[1, 2, 3,4].

Neurogenic tumors may arise from neural elements anywhere within the thorax including nerve sheath, autonomic ganglia and paraganglionic tissues. All of which trace their embryologic heritage to the neurologic crest. These tumors may exhibit a variety of cytologic products and immunohistochemically markers that aid in pathologic diagnosis[5]. Intraspinal extension of tumor via the spinal foramen occurs in approximately 10% of cases. They may be asymptomatic and discover incidentally. Significant correlation has been found without a capsule, low degree of atypia, a low mitotic index, and low cellularity for the potential for malignancy. Surgical resection was the main treatment and the mean survival was estimated to be 51.3 months. Significant difference in survival was detected according to

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differentiate the masses from neurogenic tumors and other posterior mediastinal diseases[70].

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