Primary tumours of the mediastinum

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Thymoma, neurogenic tumours, germ cell tumours and lymphoma are the usual primary tumours of the mediastinum. /uni25CF Thymoma . This is the most common mediastinal tumour, accounting for 25% of the total, and is derived from the thymus gland (Figure 60.23). Thymomas vary in behaviour from benign to aggressively invasive, as reflected in the Masoaka classification system used to stage thymo mas and more recently the TNM classification. They are often related to myasthenia gravis, a neuromuscular condi tion that can have a high associated incidence of thymomas, and inter estingly may respond to excision of the thymus gland even when the gland has no associated thymoma present. T he only reliable indicator of malignancy is cap sular invasion. Diagnosis and treatment are best achieved by complete thymectomy , which for large tumours (>5 /uni00A0 cm) Akira Masoaka , 1930–2014, Professor of Surgery , Nagoya, Japan. or if tumour invasion is suspected a median sternotomy is performed. If the thymoma is small or when the patient has myasthenia gravis and the thymus is being excised as a treatment, various less invasive approaches can be con - sidered, including a V ATS approach or a transcervical approach with or without an additional V ATS procedure. /uni25CF Germ cell tumour . The anterior mediastinum is the most common site of extragonadal germ cell tumours. They account for 13% of all mediastinal masses and cysts and contain elements from all three cell types (mesoderm, endoderm and ectoderm). They tend to present in young) adults and 75% are benign and cystic, although they may cause compression of neighbouring structures; hence, dermoid cysts are best excised. Malignancy is suspected if elevated levels of serum alpha-fetoprotein, human chorionic gonadotropin and carcinoembryonic antigen are detected. After initial treatment with chemotherapy , a patient with tumour marker normalisation and a persistent mass on CT may be considered for surgical resection. If tumour markers fail to normalise, further chemotherapy is usually o ff ered. /uni25CF Lymphoma . Lymphoma is a common cause of a mediast - inal mass lesion, particularly in the anterior mediastinum, and can lead to superior vena cava obstruction or other symptoms of local compression. The main treatment is ely required apart from chemotherapy , and surgery is rar obtaining tissue for diagnosis. /uni25CF Mesenchymal tumours . Lipomas are common in the - anterior mediastinum. Other mesenchymal tumours are very rare. - /uni25CF Thyroid . Ectopic thyroid (and parathyroid) tissue may be found in the anterior mediastinum but usually the mass is an extension of a thyroid lesion (retrosternal goitre). Exci - sion of retrosternal thyroids may be required if there is lo - - cal airway compression and stridor and can be performed via a transcervical incision, but occasionally median ster - notomy may be required.

Figure 60.23 Computed tomography scan showing a thymoma pre

senting as a mediastinal mass.

/uni25CF Neurogenic tumours . These may derive from the sympathetic nervous system or the peripheral nerves and are more prevalent in the posterior mediastinum. They may be painful but are more often discovered acciden tally on routine chest radiography and can be quite large (Figure 60.24). They include neuroblastoma in childhood, and Schwannomas and neurofibromas in adults, which are usually benign. Phaeochromocytoma arises fr om the sym pathetic chain and produces the characteristic endocrine syndrome. Excision of neurogenic tumours is generally recommended, particularly if the patient is developing symptoms. This can be performed through a thoracotom though for smaller tumours a V ATS approach can be used (Figure 60.25). /uni25CF Enlarged mediastinal lymph nodes are commonly involved by metastatic tumour, mimicking a primary mediastinal lesion. Symptoms are generally secondary to compression or invasion of a structure within the mediastinum. Surgery such as mediastinoscopy is reserved for diagnosis only . Theodor Schwann , 1810–1882, Professor of Anatomy and Physiology , successively at Louvain (1839–1848) and Liège, Belgium (1849–1888).

Figure 60.24 Computed tomography scan showing a right-sided paravertebral neurogenic tumour. Figure 60.25 Video-assisted thoracoscopic surgery (VATS) image of a neurogenic tumour attached to the posterolateral chest wall prior to excision. Figure 60.26 Computed tomography scan of the chest showing a bronchogenic cyst splaying the carina.

Revision #1
Created 2025-12-31 15:22:53 UTC by Omar Ayman
Updated 2025-12-31 15:22:53 UTC by Omar Ayman