Neurogenic tumor

Neurogenic tumours are the cause of approximately 90% of posterior mediastinal masses.

Paraspinal neurogenic tumors usually expand into the mediastinum and retroperitoneum and can reach a considerable size before they become symptomatic. Such large tumors are rare.

Classification

They can be subdivided into three groups by their location and involvement of peripheral nerves or sympathetic chain.

Peripheral nerve sheath tumour

Sympathetic ganglia tumour

Paraganglioma

Peripheral nerve sheath tumours and paragangliomas are far more common in adults while the sympathetic ganglia tumours are commoner in children.

Peripheral nerve sheath tumours

These tumours manifest as round paravertebral masses that span one or two vertebral bodies. They are homogenous, soft-tissue attenuation masses at CT and the commonest cause of posterior mediastinal and paravertebral masses. They may cause widening of the neural foramen and thickening of the adjacent posterior rib.

Schwannoma

Neurofibroma

Malignant peripheral nerve sheath tumour

Schwannoma and neurofibroma are by far the commonest type of neurogenic tumour in adults.
Sympathetic ganglia tumours

These tumours tend to present as elongated paraspinal masses that span multiple vertebral levels. Intra-tumoural calcification is common.

neuroblastoma - young children

ganglioneuroblastoma - older children

ganglioneuroma - children and adults

Neuroblastoma and ganglioneuroblastoma are most commonly seen in children and in a child they comprise the commonest neurogenic tumour.

Paraganglioma

These tumours are similar histologically to phaeochromocytoma and can be functioning or non-functioning.