CASE 1D

Microscopy

Solid spindle cell lesion showing diffuse sclerosis with areas of keloid (ropey collagen) type hyalinisation, variable cellularity and staghorn type vessels. No epithelium is present. There is no significant atypia or mitotic activity, no necrosis is seen.

Favoured diagnosis

The morphological appearances favour a SOLITARY FIBROUS TUMOUR solitary fibrous tumour, (SFT) however an immunohistochemical panel is required to exclude other entities in the differential diagnosis of a pleural spindle cell lesion which include inflammatory fibrotic process, sarcomatoid mesothelioma, synovial sarcoma, neurofibroma, spindle cell lipoma, type A thymoma, malignant peripheral nerve sheath tumour (MPNST) and smooth muscle tumour.

Further work

Immunohistochemical panel:

	CD34	BCL-2	CD99	Cytokeratin	EMA	Calretinin	Desmin	SMA
SFT	+	+	+	−	−	−	Focal	Focal
MPNST	Rare	Some	−	Rare	Some	−	Rare	Rare
Sarcomatoid mesothelioma	−	Some	Some	+	+	+	Some	+
Neurofibroma	+	+	−	−	+/−	−	−	−
Synovial sarcoma	−	+	Variable	+	+	−	−	−
Smooth muscle	Some	Some	Some	−	−	−	+	+
Type A thymoma	−	Some	Lymphocytes	+	−	Stromal cells only	−	−

STAT6 is highly sensitive and specific for diagnosis of SFT, especially nuclear positivity in SFT and negative in the other differential diagnoses.

Genetic testing for NAB2-STAT6 fusion gene can also be done.

Adequate sampling ~~the~~ of the lesion is required to assess the edge and heterogeneity, areas of necrosis or mitotic activity

which may be focal. MDT discussion regarding radiological correlates and further treatment.

Comment

These lesions arise in the pleura most commonly and have an unpredictable course as bland appearing tumours can also behave aggressively. Aggressiveness is typically associated with atypical histology and increased mitotic activity.
Treatment is usually by surgical resection, local recurrence does occur.