Psammomatous meningioma is a histologic subtype of meningioma usually presented as a heavily calcified intracranial or spinal mass lesion. The meningothelial and psammomatous types are the most common involving the spine.

Please refer to the articles on meningioma and spinal meningioma for a broad discussion of this entity.

Epidemiology

Meningiomas are more common in women, with a ratio of 2:1 intracranially and 4:1 in the spine. This histologic subtype is particularly more common to arise from thoracic spine.

Clinical presentation

There is no relevant difference on clinical presentation among the various histologic subtypes of meningioma.

Pathology

The common histologic subtypes of ossified meningioma are transitional, psammomatous, and metaplastic 3. This densely calcified tumour is characterised by the presence of numerous psammoma bodies.

This tumour is classified as a benign meningioma (WHO grade one).

Radiographic features

Plain film Plain films no longer have a role in the diagnosis or management of meningiomas. This subtype could be seem as a calcification along the neuroaxis.

CT Usually presented as an extra-axial calcified mass lesion, although in some instances the mass is hyperdense on CT without overt calcification (more sparse psammoma bodies).

MRI Signal characteristics will depend on how calcified the tumour is. If very heavily calcified then the mass will be low on all sequences with little if any visible enhancement (burnt out meningioma). If calcification is less marked then signal characteristics are typically:

T1: hypo or isointense

T2: hypo or isointense

T1 C+ (Gd): presence of enhancement

Treatment and prognosis

Surgical treatment could provide a partial or complete resection of the tumour, and the overall prognosis will depends in large part on the entirety of resection.

Recurrence rates after a surgery is related also to a young age (<50 years), multiple lesions, calcification extension, and ossification.