Pineal germinoma magnetic resonance imaging

see also Intracranial germ cell tumor magnetic resonance imaging.

Lesions are typically isodense to hyperintense to gray matter on T1- and T2-weighted MRI, with cystic and necrotic changes seen in larger masses $^{1) (2)}$.

Avid enhancement is seen following intravenous contrast administration. MRI of the entire neuroaxis and lumbar puncture is recommended to assess for CSF seeding and drop metastases.

In the pineal region they appear to "engulf" normal pineal gland tissue and can have associated central calcification, in contrast to pineocytomas, and pineoblastomas which are described as "exploding" the foci of calcification. Cystic components are common, found in upto 45% of cases.

It generally presents well-defined MRI features which usually evoke a high grade of diagnostic suspicion. Nevertheless, **bioptic confirmation** is usually considered mandatory. However, despite modern improvements, the pineal region remains one of the more dangerous sites to perform a biopsy because of the risk of hemorrhage ^{3) 4)}.

The importance of pathological confirmation should be carefully weighed up in comparison with the theoretical risks of deciding chemotherapy and radiotherapy basing only on neuroradiological findings $\frac{5}{6}$.

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