

Role of mri in assessment of cerebellopontine angle tumors

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During the past 30 years, rapid and extensive progress has made in the diagnostic imaging of the brain. Most of the progress has taken place in the development of new techniques in CT and MRI. MRI now the technique of choice for investigation most suspected lesion of the brain especially the brain stem and posterior fossa lesions. The absence of beam hardening artifacts, multiplanar capability and greater soft tissue contrast make MR better than CT in evaluation of acoustic neuroma and similar pathologies of internal auditory canal and cerebellopontine angle. MRI shows a higher level of soft tissue contrast even without the use of contrast material and can show either the normal 7th and 8th nerves or acoustic tumours. Enhanced MRI, in fact, shows up small volumetric modifications of the facial acoustic bundle, so that small tumors, less than 1 cm, that would be undetected by a CT scan, can be clearly identified. Yet, MRI is a relatively expensive imaging modality. Therefore new MRI techniques with a high sensitivity and a lower cost are being studied.

Summary and Conclusion

Lesions of the cerebellopontine angle are divided into those native to the angle (vestibular schwannoma, meningioma, epidermoid, arachnoid cyst, metastases, lipoma etc) and those extending to the angle from adjacent structure (glioma, ependymomas, choroid plexus papillomas, vascular malformation). The site of origin is the main factor in making a preoperative diagnosis for a lesion of CPA. In addition, it is essential to analyze signal intensity at magnetic resonance (MR) imaging, enhancement, shape and margins, extent, mass effect, and adjacent bone reaction.