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MR Protocols for Paediatric Neurosurgical Common Conditions: An Update Guide for Neurosurgeons

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Abstract

The biggest challenge for clinicians and surgeons when it comes to radiological examinations is the ability to request the right modalities and to understand the strengths and limitations of each modality. This is particularly important in paediatric neurosciences where despite magnetic resonance imaging (MRI) being the main imaging modality, there are several protocols, technical limitations of specific scanners and issues related to sedation that need to be taken into account. In this chapter, we describe a simple approach for six common neurosurgical conditions to guide the paediatric neurosurgeons in requesting the right MR protocol and understanding the rationale of it. Paediatric neuro-oncology, epilepsy and neck/skull base protocols are discussed elsewhere in this book and therefore will not be a focus in this chapter (Bernasconi et al., *Epilepsia* 60:1054-68, 2019; D'Arco et al., *Neuroradiology* 64:1081-100; 2022; Avula et al., *Childs Nerv Syst* 37:2497-508; 2021).

Keywords: CNS malformations; Central nervous system diseases; Epilepsy; Hydrocephalus; MRI.

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