

NEUROLOGY PROTOCOLS

PAEDIATRIC BRAIN INFLAMMATORY

CLINICAL INDICATIONS	Diagnostic assessment of suspected encephalitis or other such inflammatory process i.e. ADEM or Guillain-Barre, multiple sclerosis, transverse myelitis etc	
PATIENT PREPARATION	MRI safety checklist completed and checked. Changed into patient gown/pyjamas. NBM at least 2 hours unless requiring general anaesthetic. Contrast consent performed and IV line inserted if not done. Hearing protection with headphones and/or earplugs. Emergency buzzer is essential if non GA.	
PATIENT SET-UP	POSITION	Supine, head first. Immobilise using foam pads around the head and over ears.
PATIENT SET-UP	COIL/S	12Ch Head Coil and 4 Ch Neck Coil with spinal mat
IMAGING PROTOCOL	SEQUENCES	RANGE AND ORIENTATION
IMAGING PROTOCOL	3 Plane Localiser	Localiser through Head
IMAGING PROTOCOL	3 Plane Localiser Whole Spine	Localiser through spine-step and go protocol as set out on scanner
IMAGING PROTOCOL	t1_mpr_sag_p2_iso_	Sagittal to the midline to cover the whole head
IMAGING PROTOCOL	t2_tse_tra_512_	Inferior to superior, to cover whole head, parallel to ACPC line and perpendicular to midline/base of temp lobes on the coronal
IMAGING PROTOCOL	t2_tirm_tra_dark-fluid_fs	Inferior to superior, to cover whole head, parallel to ACPC line and perpendicular to midline/base of temp lobes on the coronal
IMAGING PROTOCOL	ep2d_diff_3scan_trace	As per the t2_tse_tra
IMAGING PROTOCOL	t2_tse_cor_512	Angled perpendicular to the AC-PC on sagittal plane and perpendicular to midline on axial.
IMAGING PROTOCOL	t2_fl3d_tra_p2_swi_fast	Angle as per axial T2-ensure whole of head covered.
IMAGING PROTOCOL	t2_tse_sag_Whole Spine	True Sagittal to the spinal canal, to cover right to left, entire spine down to Sacrum
IMAGING PROTOCOL	t2_tse_tra_whole spine	Axial to the spinal canal and vertebral bodies to cover from C1 to lower spine (may need 2-3 blocks
IMAGING PROTOCOL		<i>Review before Contrast-pre GAD t1 imaging may be required</i>
IMAGING PROTOCOL	t1_tse_sag_Whole Spine+C	True sagittal to the spinal canal, to cover right to left, entire spine down to Sacrum
IMAGING PROTOCOL	t1_mpr_sag_p2_iso_+C	Sagittal to the midline to cover the whole head

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	t1_tse_tra_upper spine +C	Axial to the spinal canal and vertebral bodies to cover from C1 to mid-spine.
	t1_tse_tra_lower spine +C	Axial to the spinal canal and vertebral bodies to cover from mid spine to at least S2. Ensure at least 1 slice overlap with upper spine

CONTRAST MEDIA	Type	Dotarem
	Volume	0.2ml/kg on 3T
	Administration	IV slow hand injection
	Test Bolus	N/A
	Flow Rate	N/A
	Timing	N/A
	Delayed Imaging	N/A

OPTIONAL SEQUENCES	<p>t1_tse_sag_Whole Spine Pre contrast may be required-please check with radiologist</p> <p>t2_tirm_Cor_2mm Whole Brain</p> <p>Single voxel spectroscopy Long TE may be required in affected brain areas</p>
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POST PROCESSING	Reformat mprage sequence into 2 other planes at a slice thickness dependant on acquisition thickness.
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SPECIAL CONSIDERATIONS	<p>Slice thickness, FOV and slice number are dependent on the age of the child. Different protocols for different ages are set up on the scanner.</p> <p>Younger children not being scanned under general anaesthetic may require a parent or guardian in the room. All accompanying people must complete a separate safety questionnaire and go through all safety checks as per the patient.</p> <p>Small children may require to be scanned under General Anaesthetic</p>
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