

## NEUROLOGY PROTOCOLS

### PAEDIATRIC METABOLIC

<b>CLINICAL INDICATIONS</b>	In the investigation of a known or suspected metabolic disorder, including ADEM (Acute disseminated encephalomyelitis)	
<b>PATIENT PREPARATION</b>	MRI safety checklist completed and checked. Changed into patient gown. NBM at least 2 hours unless requiring general anaesthetic. Contrast consent performed incase required. Hearing protection with headphones and/or earplugs. <b>Emergency buzzer is essential.</b>	
<b>PATIENT SET-UP</b>	<b>POSITION</b>	Supine, head first. Immobilise using foam pads around the head and over ears.
	<b>COIL/S</b>	32Ch Head Coil-ideally 12Ch Head Coil and/or spinal mat if ADEM indicated
<b>IMAGING PROTOCOL</b>	<b>SEQUENCES</b>	<b>RANGE AND ORIENTATION</b>
	<b>3 Plane Localiser</b>	Localiser through Head
	<b>t1_mpr_sag_p2_iso_</b>	Sagittal to the midline to cover the whole head
	<b>t2_tse_tra_512_</b>	Inferior to superior, to cover whole head, parallel to ACPC line and perpendicular to midline/base of temp lobes on the coronal
	<b>t2_tirm_tra_dark-fluid_fs</b>	Inferior to superior, to cover whole head, parallel to ACPC line and perpendicular to midline/base of temp lobes on the coronal
	<b>ep2d_diff_3scan_trace</b>	As per the t2_tse_tra
	<b>svs_se_TE288</b>	Positioned same plane as axial imaging, usually covering left basal ganglia (avoiding abnormal tissue)
	<b>t2_tse_cor_512</b>	Angled perpendicular to the AC-PC on sagittal plane and perpendicular to midline on axial.
	<b>t2_fl3d_tra_p2_swi_fast</b>	Angle as per axial T2-ensure whole of head covered.
		<b><i>IF ADEM SUSPECTED CONTINUE ON TO DO PRE SPINE IMAGING (SEE BELOW)</i></b> <b><i>Review prior to getting off the table where possible</i></b>
	<b>t1_mpr_sag_p2_iso_post</b>	As per the pre contrast imaging if required

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<b>CONTRAST MEDIA</b>	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

<b>OPTIONAL SEQUENCES</b>	If in the investigation of ADEM, spine imaging must also be done pre and post contrast sag t2/t1 pre with axial and sag t1 post with axial vib's t1_mpr_sag_post C if investigating ADEM
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<b>POST PROCESSING</b>	Reformat mprage sequence into 2 other planes at a slice thickness of 1mm
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<b>SPECIAL CONSIDERATIONS</b>	<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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