

PAEDIATRIC PROTOCOLS

BRAIN (FEED & WRAP)

CLINICAL INDICATIONS	Perinatal asphyxia, Hypoxic Ischaemic Event (see special considerations), seizure, infection(CMV) or suspected developmental abnormality. Usually performed on neonates & up to 20 weeks of age.	
PATIENT PREPARATION	<p>MRI safety checklist completed and checked.</p> <p>Ensure all clothes with metal domes, clips, and fasteners are removed and wrap baby in simple cloth nappy.</p> <p>Patient needs to be fed and settled approximately 20 mins prior to the scan.</p> <p>Place cut down earplugs in the ears and also use head phones/thick head pads to immobilise and protect ears.</p> <p>IV Line inserted prior if infection indicated.</p> <p>Emergency buzzer is essential for watch in the room.</p>	
PATIENT SET-UP	POSITION	Supine, head first. Please set up with large bean bag and white foam pad. Suction must be set up to remove air from bean bag. Immobilise using foam pads also before removing air.
	COIL/S	32Ch Head Coil, with spinal mat pad removed.
IMAGING PROTOCOL	SEQUENCES	RANGE AND ORIENTATION
	3 Plane Localiser	
	t2_haste_sagittal	Right to left, centred to midline on axial/coronal localiser
	t2_haste_coronal	Anterior to posterior, perpendicular to midline on axial and to perpendicular to ACPC line on the sagittal
	t2_blade_tra_3mm	Inferior to superior, to cover whole head, parallel to ACPC line and perpendicular to midline/base of temp lobes on the coronal
	t2_blade_tra_dark-fl_3mm	As per the t2_blade_tra
	t2_tse_cor_160_3mm	As per the t2_haste_coronal
	ep2d_diff_3scan_trace	as per t2_blade_tra
	t2_tse_3mm_hemo	Slice position as per axial's (consider SWI if baby still & ?CMV)
	t1_mpr_sag_p2_iso_0.9	3d Volume to cover the whole head/brain/upper c spine
	svs_te288_Left Basal ganglia(?HIE)	Single voxel spectroscopy in Left basal ganglia avoiding blood if any
		<i>Review for contrast if indicated</i>

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

OPTIONAL SEQUENCES	<p>t1_mpr_tra_p2_iso if breathing movement on sagittal</p> <p>mprage post C if required</p> <p>SWI sequence is baby very still especially in ?CMV infections</p> <p>3D TOF MR angiography of circle of Willis if looking for something more vascular (HIE)/ focal or PC MRV for thrombosis</p>
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POST PROCESSING	<p>reformat mprage sequence into 2 other planes at the same slice thickness as the acquisition i.e. 0.9mm</p>
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SPECIAL CONSIDERATIONS	<p>For HIE, scans to be done within 6 days of initial event or Post Day 10 of initial event. All HIE babies should have spectroscopy done if settled enough.</p> <p>MRI safety check sheet to be completed by all personnel accompanying child into the room.</p> <p>Pulse oximetry may have to be used if patient has monitoring/oxygen on from the ward.</p>
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