

NEUROLOGY PROTOCOLS

PAEDIATRIC NAI

CLINICAL INDICATIONS	In the investigation of injuries in suspected NAI cases
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PATIENT PREPARATION	<p>MRI safety checklist completed and checked. Changed into patient gown/pyjamas. NBM at least 2 hours unless requiring general anaesthetic. Contrast consent performed incase required. Hearing protection with headphones and/or earplugs. Emergency buzzer is essential.</p>
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PATIENT SET-UP	POSITION	Supine, head first. Immobilise using foam pads around the head and over ears.
	COIL/S	12Ch Head Coil and Spinal coil

IMAGING PROTOCOL	SEQUENCES	RANGE AND ORIENTATION
	3 Plane Localiser	Localiser through Head
	t1_mpr_sag_p2_iso_	Sagittal to the midline to cover the whole head
	t2_tse_tra_512_	Inferior to superior, to cover whole brain/bony skull , parallel to ACPC line and perpendicular to midline/base of temp lobes on the coronal
	t2_tse_sag_3mm	Right to left to the midline, to cover whole brain and bony skull.
	t2_tirm_tra_dark-fluid_fs	As per the t2_tse_t2_512-should be same slices and positioning.
	ep2d_diff_3scan_trace	As per the t2_tse_tra
	t2_tse_cor_512	Angled perpendicular to the AC-PC on sagittal plane and perpendicular to midline on axial. Cover whole brain/bony skull
	t2_fl2d_cor_hemo	Angled perpendicular to the AC-PC on sagittal plane and perpendicular to midline on axial. Cover whole brain/bony skull
	t2_fl3d_tra_p2_swi_fast	Angle as per axial T2-ensure whole of head covered.
	3D TOF_MRA_Whole Brain	Axially to cover the entire brain or at least to well above known lesion
	MRV_PC_3D_Cor	Position as per the Cor t2 ensuring entire venous system of brain covered anterior to posterior.
	t1_tse_sag_3mm_Whole Spine	Sagittal to the cord to cover right to left of the vertebral bodies entire spine

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	t2_tirm_sag_3mm_Whole Spine	Sagittal to the cord to cover right to left of the vertebral bodies entire spine <i>If blood products present proceed to t2's</i>
	t2_tse_sag_3mm_whole spine	As the previous sagittal's
	t2_tse_tra_spine	Axial to the vertebral bodies to cover ROI's, especially if subdural blood L Spine
		<i>Review for contrast-may be required or CE MRV may be required</i>
	t1_mpr_sag_p2_iso_+C	Sagittal to the midline to cover the whole head as per pre imaging.

CONTRAST MEDIA	Type	Dotarem
	Volume	0.2ml/kg on 3T
	Administration	IV slow hand injection of CEMRV not required
	Test Bolus	N/A
	Flow Rate	2mls/sec
	Timing	Care Bolus
	Delayed Imaging	N/A

OPTIONAL SEQUENCES	TOF MRV can be substituted if PC MRV not available Cor CE MRV +C may be required if TOF MRV not adequate
	Contrast may be helpful in the presence of subdurals-contrast may help in aging these. Repeating the t2_tirm_tra_dark-fluid_fs post C may also be helpful.

POST PROCESSING	Reformat mprage sequence into 2 other planes at a slice thickness of 1mm or 0.9mm depending on initial acquisition.
	Reformat the TOF angiogram/mrv into mips and send through to PACs.

SPECIAL CONSIDERATIONS	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.
	Most children are younger and scanned under GA-Older children not being scanned under general anaesthetic may require a guardian or watch in the room. All accompanying people must complete a separate safety questionnaire and go through all safety checks as per the patient.