

COMPARISON OF CONVENTIONAL CEREBRAL MRI (CMRI) AT DAY 4 AND 10 AFTER PERINATAL HYPOXIC-ISCHEMIC ENCEPHALOPATHY TREATED WITH HYPOTHERMIA

J.H. Skranes¹, T. Stiris¹, A.S. Alonso², M. Thoresen³, D. Fugelseth¹

¹*Dept. of Neonatal Intensive Care, ²Neuroradiology, Oslo University Hospital, Ullevål, Oslo, Norway,*

³*Dept. of Childhealth, University College of Bristol, St. Michaels Hospital, Bristol, UK*

Background: Optimal timing of cMRI after therapeutic hypothermia is controversial.

Aim: To compare cMRI postnatal d4 with d10.

Methods: Sagittal/axial T1 IR-weighted and axial T2-weighted images were visual scored: Basal ganglia and thalami (DNGM), white (WM), cortical gray matter (CGM) 0-3 (0=normal, 1=mild, 2=moderate, 3=severe), posterior limb of capsula interna (PLIC) 0-2 (0=normal, 1=equivocal, 2=loss), haemorrhages 0-2 (0=none, 1=extra-axial, 2=intracerebral).

Results: Twenty-five infants (GA 36-41) were examined.

	MRI d4				MRI d10			
	DNGM	CGM	WM	PLIC	DNGM	CGM	WM	PLIC
No1	3	1		2	3	2		2
No2	2	1	3	1	2	3	3	1
No3	1		3		2	2	2	
No4	1			1	2	1		
No5	2		2	1	2		2	

[cMRI data:]

Eighteen had normal; seven had abnormal scans on d4 and d10. Five had mild to severe changes in DNGM d4, two progressed from mild to moderate on d10. Two grade 1 CGM progressed to grade 2 or 3 on d10. Two without CGM pathology d4 had mild to moderate on d10. Three had grade 2 or 3 WM findings; one regressed from grade 3 to 2. Four had abnormal PLIC on d4, two disappeared d10. Two had haemorrhages on d4 and d10; grade 2 (data not shown in the tbl)

Conclusions: CGM and DNGM lesions progressed from day d4 to day d10, WM and PLIC regressed slightly from d4 to d10.