

The MR-compatible incubator in the “Vienna General Hospital”

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Facts about “Vienna General Hospital”:

- MR Diagnostic Incubator System nomag® IC (Philips 1.5T)
- Part of the Medical University Vienna
- Level III Neonatology
- 2500 birth per year
- 250 VLBW infants per year

Retrospective-Study:

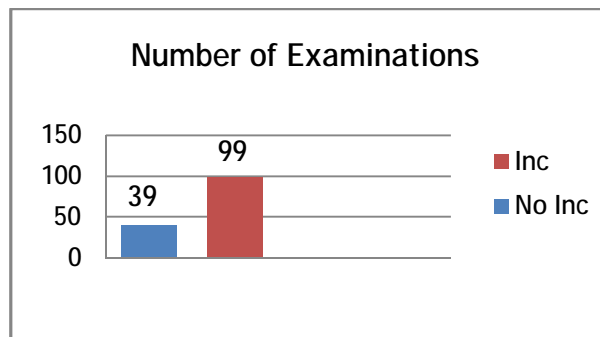
- 3 years period
- Clinical and radiological aspects of 138 neonatal MRI examinations

Comparison of neonatal MR examinations with and without a MR-compatible incubator:

Advantages in examination feasibility and clinical decision-making

Methods – MRI Protocols:

Routine protocols	Special Protocols
Fast spin-echo T2-weighted	Angiography
Axial T1-weighted	Spectroscopy
Gradient-echo diffusion sequences	Diffusion-tensor imaging
3 D T1 gradient echo sequences	



Clinical Diagnoses:

Diagnosis	n	Change in Management	%
Seizures	29	19	65
Asphyxia	19	11	57
Metabolic Disease	6	6	100
CNS Infection	6	4	66
Trauma	2	2	100
Malformation	20	17	85
Thrombosis	7	7	100
Tumor	8	7	87
Posthemorrhagic Hydrocephalus	14	13	92
Infarction	3	2	66

Examination conditions:

	INC(=99)	No INC(=39)	P value
Mean Age (GA)	38,8	46,1	P=0,0001
Mean Weight (g)	2791	3365	P=0,043
Under 200g	28%	16%	P=0,130
Mean Imaging time	30,1min	30,5min	P=0,594
Mean number of sequence	10,7	10,4	P=0,886
Ventilation during examination	33,3%	30%	P=0,842
Critically ill infants	51%	41%	P=0,344