

Half Dose versus Single Dose Gadobutrol for Extracellular Volume Measurements in Cardiac Magnetic Resonance

Supplementaray Material

Patient selection	2
Full CMR-Protocoll of the NAPKON-HAP-Trial, local Study Site (DHZB).....	3
Inter-Observer-Variability	4

Patient selection

All examinations performed in our hospital between May 2021 and December 2022 as part of the NAPKON-HAP-trial were screened for the following inclusion criteria:

1. Acquisition of stress and rest perfusion with a bolus of 0.05 mmol/kg gadobutrol each
2. Acquisition of T1-mapping native, after the first bolus and after the second bolus in diagnostic quality.
3. Availability of an hematocrit at the day of the CMR
4. If both baseline and follow-up-examinations are available for a patient, only the baseline examination was included.

41 CMR examinations were identified in the specified time frame.

12 Examinations were excluded as either no contrast agent was given, only one bolus was given, or a different contrast agent dose was given.

2 Examination were excluded due to incomplete or non-diagnostic T1-mapping sequences.

1 Examination was excluded due to missing hematocrit information.

1 Examination was excluded as it was a follow-up examination of a patient already included.

25 Examinations were available for analysis.

Full CMR-Protocoll of the NAPKON-HAP-Trial, local Study Site (DHZB)

Time (min)	Description	Sequence Name	Orientation
-18	Survey	FFE	Transversal, Sagital, Coronal
-15	Planning	Cine	RAO, p4CV
-13	LV 3CV	Cine, 50 Phases per Beat	3CV
-12	Native T1-Mapping	MOLLI (3-3-5)	SAX 2 slices (basal, medial) Slice thickness 10mm
-8	T2-weighted imaging	T2 STIR Black Blood TR 2000ms, TE 75ms	SAX full coverage (slice thickness 8mm, no gap), 4CV, 2CV, 3CV
-4	T2-Mapping	GraSE	SAX 2 slices (basal, medial) Slice thickness 8mm
0	Quantitative Vasodilator Stress-Perfusion	Qperf	SAX 3 slices (basal, medial, apical) Slice 4 in ascending Aorta
3	LV SAX, 4CV, 2CV	Cine, 50 Phases per Beat	SAX full coverage (slice thickness 8mm, no gap), 4CV, 2CV
8	Real-Time in-/expiration	sBFFE	Medial SAX
	T1-Mapping	MOLLI (3-3-5)	SAX 1 slice
10	Quantitative Rest-Perfusion	Qperf	SAX 3 slices (basal, medial, apical) Slice 4 in ascending Aorta
12	RV-Function	Cine, 25 Phases per Beat	Transversal full stack (slice thickness 8mm, no gap)
17	2D-Flow	Phase Contrast VENC 200 cm/s (higher if aliasing)	Ascending aorta & pulmonary artery
20	Late gadolinium enhancement (LGE)	mDIXON	SAX full coverage (slice thickness 10mm, gap -5mm), 4CV, 2CV, 3CV
25	Post-contrast T1-Mapping	MOLLI (3-3-5)	SAX 2 slices (basal, medial) Slice thickness 10mm
27	Myocardial strain	fSENC	SAX 3 slices (basal, medial, apical), 4CV, 2CV, 3CV
32	End (total 50 min)		

Inter-Observer-Variability





