

# Pre Scan Information, Good Communication and Music - The Patient's Perspective to Improving Cardiovascular Magnetic Resonance Tolerability

Mohammed Khanji, Teresa Castiello, Mark Westwood, Steffen E Petersen

Barts Health NHS Trust & Queen Mary University of London, UK

## Background

There has been an expansion in the availability and use of Cardiovascular Magnetic Resonance (CMR) for improved diagnosis and prognosis assessment. Although CMR is known to be safe we have little data on tolerability of the study from a patient's perspective. We wished to evaluate patient tolerability and possible modifiable factors that may improve the patient experience.

## Methods

We distributed a short questionnaire to 100 patients scanned in our centre between January and February 2014. Patients completed it after their scan. We collected patient demographics, whether the study involved pharmacological stress, patient tolerability and feedback about ways of improving patient satisfaction

## Conclusions

CMR was generally well tolerated and most of the patients would be willing to repeat the test if indicated. Adequate information about the procedure before the scan and good communication during CMR improves tolerability. Additional background music in addition to good communication during CMR may also be useful in helping them to relax, thus enhancing the patient experience.

**Acknowledgements:** Thanks to all CMR staff for their help and support.

## Results

### Demographics

100 respondents, males 65%, mean age of 54 years (range 19-85). 90% outpatients. 65% adenosine stress perfusion studies.

### Information

88% reported that they had been given enough information before the procedure.

### Tolerability

86% per cent of the respondents tolerated the scan well (43% without any problem and 43% finding the study 'slightly uncomfortable'). 14% did not tolerate the scan (6% finding it 'very uncomfortable' and 8% 'extremely uncomfortable').

24% were extremely or very worried before the test, 48% were not worried at all.

### Discomfort issues

Noise (27%) ; limited space (30.5 %). Of those who had an adenosine study 30% listed symptoms, such as chest tightness among the most uncomfortable aspects.

### Have a scan again?

81% 'yes', 14% 'maybe', 5% 'never again'.

### Improve tolerability

17% of the patients felt that more communication during the procedure would help and 36% asked for background music.

**Patients who felt they had enough information about the test were significantly more likely to tolerate the scan then not tolerate compared to those who did not have enough information (75 of 83 vs 5 of 10 patients respectively,  $p = 0.001$ ).**

Table showing the relationship of scan tolerance with Perceived information level before the scan

		Tolerated scan		Total	
		No	Yes		
Enough Information	No	Count	5	5	10
		% within enough information	(50.0%)	(50.0%)	(100.0%)
		% within tolerate scan yes or no	(38.5%)	(6.3%)	(10.8%)
Yes	Count	8	75	83	
		% within enough information	(9.6%)	(90.4%)	(100.0%)
		% within tolerate scan yes or no	(61.5%)	(93.8%)	(89.2%)
Total	Count	13	80	93	
		% within enough information	(14.0%)	(86.0%)	(100.0%)
		% within tolerate scan yes or no	(100.0%)	(100.0%)	(100.0%)

Table 1. Data are counts recorded per respondent with percentages in brackets.  $P = 0.001$ , chi square for proportion tolerating scans with and without enough information before the test.

Chart Showing CMR Tolerability Based on Pre Scan Information

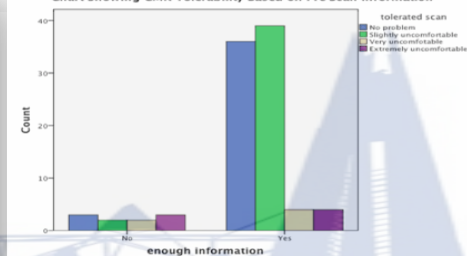


Figure 1. Bar chart showing CMR tolerability based on whether patient felt they had enough information about the scan.