

**Cardiac MRI in pediatric population – Do we really need sedation?**

*Wolak, A; Shelef, I; Rosen, P; Ilia, R; Zalstein, E; Levitas, A  
Soroka University Medical Center, Beer Sheva, Israel*

Background: Cardiac MRI (CMR) is an essential tool in the assessment of congenital heart disease and other cardiac pathologies. Yet, the acquisition of CMR is complicated and requires full cooperation of the patients, which is difficult especially with children who often require full sedation and ventilation. The aim of the current study is to describe our experience in practicing a special child oriented preparation protocol.

Methods: From February 2009 to October 2009 twenty five consecutive patients under the age of 16 were included. Patients were instructed to report to the clinic an hour ahead of their scheduled time. Upon arrival the children and the parents were taken to a MRI simulator where they received full explanation on the procedure by the supervising physician and trained breathing instructions. Parents were encouraged to join their children during the study. During the acquisition, breathing and other instructions were given in the child's mother tongue.

Baseline characteristics, study data and study quality were recorded.

Results: The mean age was  $11 \pm 4$  (4m-16y). There were 19 (76%) males. Of the patients, 17 (68%) Spoke Arabic, 7 (28%) spoke Hebrew and one (4%) spoke English. The indication for the study was assessment of right ventricle in 17 (68%) patients, investigation of cardiomyopathy in 7 (28%) patients and investigation of aborted sudden death in one (4%). Only two patients (8%) underwent sedation and intubation (the first was 4 months old and the second was diagnosed with severe retardation). The average acquisition time was  $1:01h \pm 21m$  (21m-1:40h). Study quality was good in 16 (64%) patients, fair in 7(28%) and poor in 2(8%). All the studies were interpretable and provided information about the referral clinical query.

Conclusion: High quality CMR can be obtained in the vast majority pediatric patients without need for sedation and intubation when using a special child oriented preparation protocol.