

Meeting abstract

Open Access

## 409 Case study: left atria mass evaluation with hyper-enhancement imaging

Mary P Watkins\*, Tamara Donahue, Peggy A Brown, Shelton D Carauthers and Samuel A Wickline

Address: Washington University, St. Louis, MO, USA

\* Corresponding author

from 11<sup>th</sup> Annual SCMR Scientific Sessions  
Los Angeles, CA, USA. 1–3 February 2008

Published: 22 October 2008

*Journal of Cardiovascular Magnetic Resonance* 2008, **10**(Suppl 1):A123 doi:10.1186/1532-429X-10-S1-A123

This abstract is available from: <http://jcmr-online.com/content/10/S1/A123>

© 2008 Watkins et al; licensee BioMed Central Ltd.

### Introduction

A 58 year old woman was referred for functional and contrast enhanced cardiovascular magnetic resonance (CMR) scan to evaluate a left atria mass reported on echocardiogram. The patient had history of atypical chest pain and prior breast cancer.

### Purpose

Evaluation of left atria mass possible wall attachment and tissue characterization

### Methods

Cardiac MR was performed on a 1.5 T, Philips Achieve, using a 5-element phased-array surface coil. Survey images revealed an abnormal structure near the left atrial inferior wall. Basic functional CMR views were performed to demonstrate the mass orientation. The optimal imaging plane, short axis, was selected for T1 and T2 weighted dual inversion recovery black blood (dualIR) images with and without fat suppression were acquired to characterize the tissue of the abnormal mass. Cine CMR images (steady state free precession sequence) demonstrated the mass attached to the inferior septal wall. Perfusion study of the atria in short axis plane was performed with 8 ml of gadolinium with rate of 5 ml/sec. No perfusion of the mass was seen. An additional injection of 32 ml of gadolinium at a rate of 1 ml/sec was performed. Post T1 dualIR images noted no enhancement of the mass. Post 3D hyper-enhancement in multiple planes was performed. No hyper-enhancement was observed on the delayed

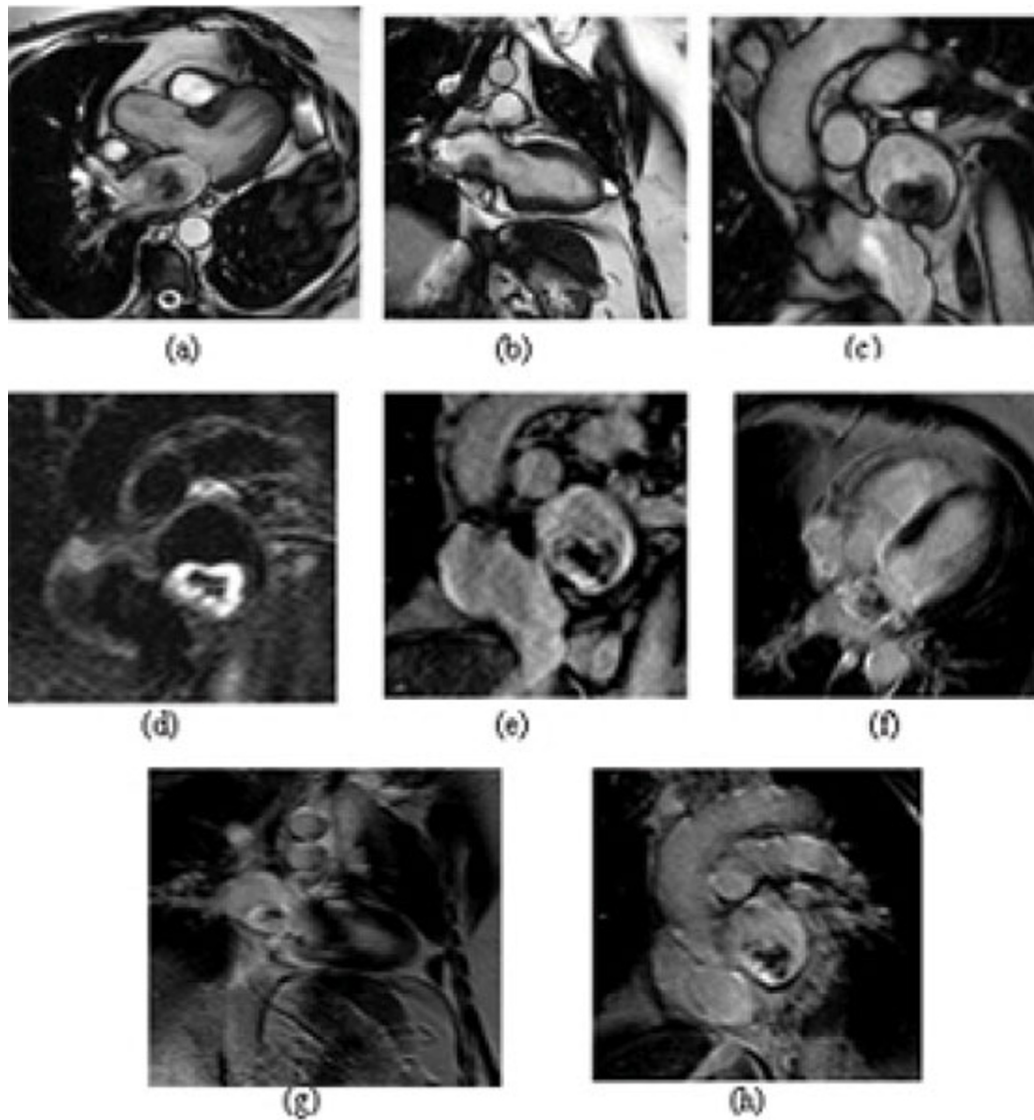
enhancement (segmented inversion recovery fast gradient echo sequence images).

### Results

The mass is globulated with a necrotic center and surrounded with fluid. No enhancement of the mass with gadolinium, no perfusion to the mass or hyper-enhancement. Subsequently, the mass was removed and biopsy results are pending.

### Conclusion

CMR is an excellent tool to evaluate abnormal heart structures and characterize myocardial tissue non-invasively. The ability to use multiple planes with high resolution plus image surrounding structures enables CMR to eliminate obstacles inherent in echocardiography.



**Figure 1**

(a) LVOT TFE cine (b) VLA TFE cine (c) SA TI BB (d) T2 fat suppression (e) SA TI BB Post (f) 3D Post HLA (g) 3D Post VLA (h) 3D Post SA.

Publish with **BioMed Central** and every scientist can read your work free of charge

*"BioMed Central will be the most significant development for disseminating the results of biomedical research in our lifetime."*

Sir Paul Nurse, Cancer Research UK

Your research papers will be:

- available free of charge to the entire biomedical community
- peer reviewed and published immediately upon acceptance
- cited in PubMed and archived on PubMed Central
- yours — you keep the copyright

Submit your manuscript here:  
[http://www.biomedcentral.com/info/publishing\\_adv.asp](http://www.biomedcentral.com/info/publishing_adv.asp)

