

Technologist presentation

Comprehensive cmr imaging in patients with arrhythmia

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Introduction

Achieving high resolution CMR cine images in patients with arrhythmia continues to be a clinical challenge. Supraventricular (PACs, Atrial flutter, atrial fibrillation) and ventricular arrhythmias (PVCs, bi/trigeminy) present unique difficulties to the scanning operator. A number of techniques and scanning protocols exist in order to produce reproducible and quality cine images in arrhythmia but familiarity and experience using these protocols may be limited outside of high volume dedicated CMR units.

Purpose

Our aim is to present a comprehensive overview of scanning techniques and sequences used to scan patients with various forms of arrhythmia.

Methods

We propose to present a step by step guide to scanning in arrhythmia and explain the sequences used, highlight the advantages and disadvantages of each sequence, and offer some tips to maximize results.

Results

A detailed presentation highlighting use of different techniques and sequences to achieve optimal cine images in a variety of challenging arrhythmic patients.

Conclusions

Familiarity and experience imaging patients with arrhythmia may be limited outside of high volume CMR units. Through a detailed breakdown of sequences available and guidance to minimize the number of "poor scans", we feel an overview of this kind would be of considerable use to technicians involved in CMR delivery.