MCE for viability assessment in ischaemic cardiomyopathy

Clinical Case Portal

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Abstract

Case from the Contrast Echo Box
Detection of Viability

Introduction

Patient with previously undiagnosed anterior MI who comes for the first time to medical attention because of heart failure symptoms.
Angiography shows 70% LAD stenosis, in the absence of ischaemic symptoms, and revascularisation will be performed only if tissue in the LAD territory is viable. (fig 1-3)

Case Report

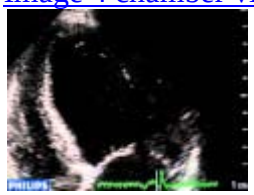
Rest perfusion, assessed as late replenishment (10 seconds after flash) is significantly reduced (but not completely absent) in the true apex and distal part of apical segments in 4-chamber (fig 4-5), whereas in 2 (fig 7-8) and 3-chamber (fig 6) hypoperfusion does not extend beyond true apex; anterior mid and basal segments show normal perfusion while basal lateral is not interpretable.
Revascularization will be indicated, since viability is substantially absent only in the true apex (1 segment).

Quantitative Analysis of MCE

Replenishment velocity is blunted in the apical segments (red lower curves)-for comparison see the green normal curve sampled in the basal-mid septum. (fig 9)

Video 1 :

Image 4 chamber view



Video 2 :

Image 2 chamber view

Video 3 :

Image short axis view

Video 4 :

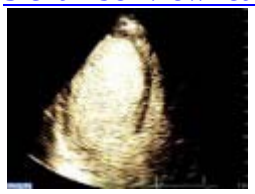
4 chamber view triggered

Video 5 :

4 chamber view triggered bis

Video 6 :

3 chamber view realtime



Video 7 :
2 chamber view triggered

Video 8 :
2 chamber view realtime

Video 9 :
Video