

Myocardial Perfusion Imaging Measurements with FMTVDM Unmask Critical CAD

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A 54-year old woman presented with new onset dyspnea associated with exertion. She underwent myocardial perfusion imaging (MPI) with sequential measurements shown in figure 1 and table 1. Figure 2 shows how these measured changes revealed significant isotope wash-in (delayed uptake and redistribution). She subsequently underwent angiography with critical coronary artery disease identified as shown in figure 3.

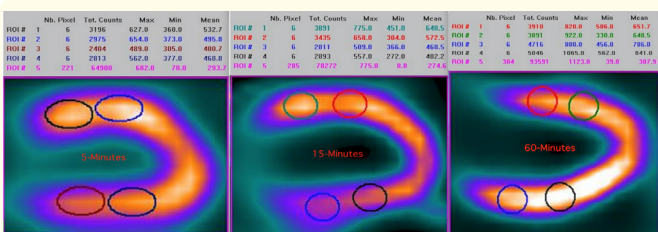


Figure 1: Qualitative Images with Simultaneous Sequential measurements of isotope made at 5-, 15- and 60-minutes.

	Basal Anterior	Mid Anterior	Basal Posterior	Mid Infero Posterior	Total Area
5-Minutes	532.7	495.8	400.7	468.8	293.7
15-Minutes	648.5	572.5	468.5	482.2	274.6
60-Minutes	651.7	648.5	786.0	841.0	307.9

Table 1: Actual measured isotope per region of interest obtained from vertical long-axis (VLA) imaging of the heart.

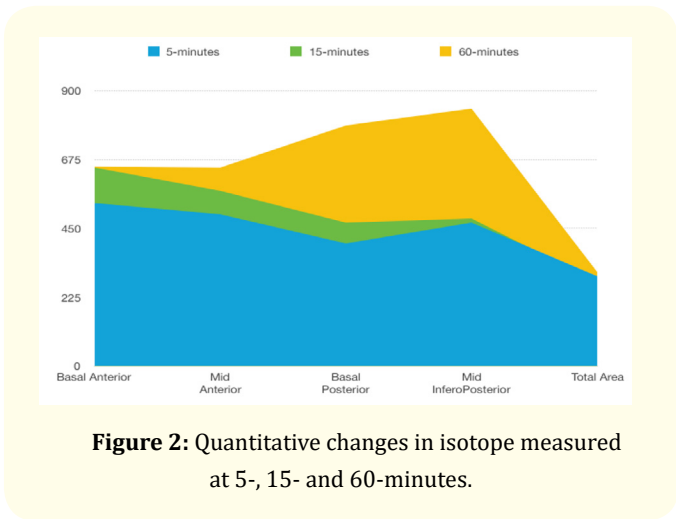


Figure 2: Quantitative changes in isotope measured at 5-, 15- and 60-minutes.

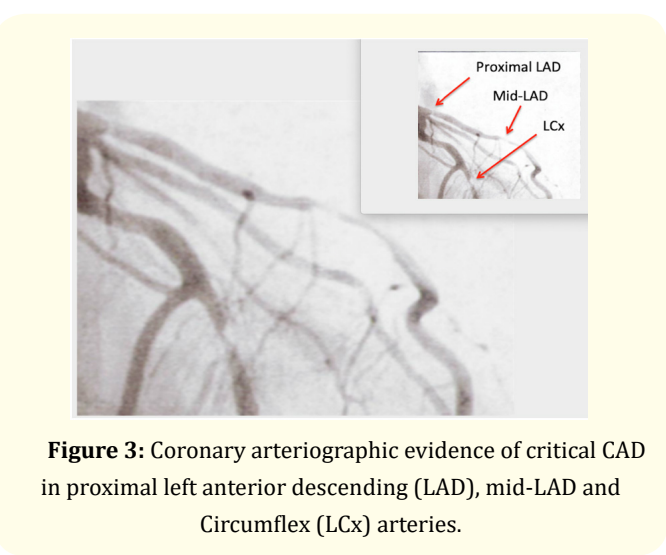


Figure 3: Coronary arteriographic evidence of critical CAD in proximal left anterior descending (LAD), mid-LAD and Circumflex (LCx) arteries.

MPI sequential imaging with measured changes in isotope re-distribution revealed critical disease in both the LAD and Cx arteries. Visual interpretation alone can fail to detect these changes. Delayed uptake and redistribution of isotopes during MPI indicate critical CAD, including vulnerable inflammatory plaques, which indicate a need for immediate intervention.

Acknowledgment

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