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ABSTRACTS

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VIDEODENSITOMETRIC ASSESSMENT OF MYOCARDIAL
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Myocardial perfusion presently is evaluated clinically by thallium or Xenon myocardial scintigraphy. To determine if regional perfusion could be assessed at cardiac catheterization, contrast density-time curves were obtained from myocardial regions supplied by 15 coronary artery segments during intracoronary injection of Renografin 76. Studies were obtained with DSA using fluoroscopic technique at 20mA and 70-90 kVp. Images were processed in real time at 30 frames/sec into a 512x512x8 bit matrix, recorded on videotape, and transferred into a Nova computer for videodensitometric analysis. Regions of interest were traced over the proximal and distal coronary arteries and over the myocardial wall supplied by each coronary artery. Density of contrast material in these regions of interest were compared with regard to appearance and washout of dye. Analysis of these density-time curves revealed delayed washout of dye in areas perfused by coronary arteries with severe stenosis versus areas perfused by normal coronary arteries. We conclude that digital subtraction techniques can be used during coronary angiography to assess myocardial perfusion.