



## IMAGING AND DIAGNOSTIC TESTING

### THE SIGNIFICANCE OF TRANSIENT ISCHEMIC DILATION IN THE SETTING OF OTHERWISE NORMAL SPECT RADIONUCLIDE MYOCARDIAL PERFUSION IMAGES

ACC Poster Contributions

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**Background:** Transient ischemic dilation (TID) is thought to be a marker of severe and extensive coronary artery disease (CAD) in patients (pts) with abnormal SPECT MPI. The relationship of TID to the anatomical extent/severity of CAD in pts with otherwise normal SPECT MPI is sometimes considered to indicate balanced ischemia, but this has not been studied.

**Methods:** From a database of over 20,000 pts who underwent SPECT MPI between 7/28/00 and 7/29/09, 96 pts without cardiac history who had normal SPECT MPI images and coronary angiography within 6 mos were identified. To adjust for different stress and image protocols, for each pt. the TID value was divided by published normal thresholds, and a TID index was derived; a TID index > 1 was considered to be TID +. We examined the relationship of TID + to the presence of CAD (stenosis > 70%), the number of vessels with disease (#VD), left main or multi vessel CAD (LM/MVD) and Duke CAD prognostic index (PI).

**Results:** 28 (29.2%) of the 96 pts. were TID +. There was no significant association of TID + with presence of CAD, #VD, LM/MVDM or the CAD prognostic index (p=NS for all variables).

**Conclusions:** The presence of TID in patients with otherwise normal SPECT MPI does not predict presence, extent or severity of CAD and therefore most often does not indicate balanced ischemia in these patients.

TID and Presence and Severity of CAD

	TID +	TID -	P value
N	28 (29.2%)	68 (70.8%)	
CAD +	8 (28.6%)	24 (35.5%)	NS (0.7)
#VD	0.39 + 0.69	0.63 + 1.06	NS (0.8)
MVD/LM CAD	3 (10.7%)	11 (16.2%)	NS (0.3)
CAD PI	13.64 + 21.02	15.41 + 22.18	NS (0.7)