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REST AND EXERCISE MYOCARDIAL PERFUSION IMAGING WITH TC-99M RP-30 VS TL-201

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The preliminary efficacy of exercise(E)-rest(R) RP-30 CARDIOLITE™(C) myocardial perfusion imaging was studied in 19 pts with angiographic CAD (50% stenosis) and compared to T1-201(T1) scintigraphy within 5.5 days (1-14 range). Pts underwent equivalent maximal treadmill E for both C and T1 studies and C images were obtained 1 h after 185-370MBq I.V. injection. Separate E & R injections were made over 24 hrs. T1 images were obtained 10 mins and 4 hrs after 74-111MBq injection at peak E. for both C and T1, 3 identical 10 min planar views were obtained and visually assessed for the presence and location of perfusion defects. Defects were divided into ischemia(I) and scar based on comparison of R vs E for C and 4 hrs vs E for T1. Results: Both C and T1 were abnormal in 17/19 pts, with 2 pts normal by both. 16pts were judged to have I by both T1 and C. of 171 segments, C and T1 were classified identically in 153 (89.5%). Sensitivity and specificity for CAD in each of the major coronary arteries were not significantly different, being 69% & 67% for all vessels respectively for C and 67% & 53% respectively for T1. Thus R & E C appears to be comparable to E & redistribution T1 for detection and localization of CAD as well as identification of I. Since much larger doses of C will be possible than with T1, C offers additional advantages of first pass and gated studies to assess global and regional function.