



Non Invasive Imaging (Echocardiography, Nuclear, PET, MR and CT)

HORMONE REPLACEMENT THERAPY IS ASSOCIATED WITH LESS CORONARY ATHEROSCLEROSIS AND LOWER MORTALITY

Moderated Poster Contributions

Non Invasive Imaging Moderated Poster Theater, Poster Hall, Hall C

Friday, March 17, 2017, 4:00 p.m.-4:10 p.m.

Session Title: Imaging With Cardiac CT: The Case for Calcium

Abstract Category: 27. Non Invasive Imaging: CT/Multimodality, Angiography, and Non-CT Angiography

Presentation Number: 1176M-05

Authors: *Yoav Aronson, Alan Rozanski, Heidi Gransar, Yuka Otaki, Mhairi Doris, Frances Wang, John Friedman, Sean Hayes, Louise Thomson, Balaji Tamarappoo, Piotr Slomka, Damini Dey, Daniel Berman, Cedars-Sinai Medical Center, Los Angeles, CA, USA*

Background: There is a controversy regarding the role of hormone replacement therapy (HRT) as a cardio-protective agent in post-menopausal women. We aim to examine the effect of HRT treatment on coronary artery calcium (CAC) and on mortality in a large retrospective cohort of post-menopausal women undergoing CAC scanning.

Methods: 4286 consecutive asymptomatic post-menopausal females (average age 62.4; IQR 56-68). who underwent CAC scanning in our institution between 1998 and 2012 were followed-up for mortality (8.4 ± 3.6 years after testing; minimum one year). Medical history including HRT therapy, height, weight and blood pressure, and measured lipid and glucose values were assessed.

Results: Among the cohort patients, 41% reported taking HRT at the time of the scan. Women using HRT were younger (70.6±7.4 vs. 63.5±8.7; p<0.001), with lower prevalence of hypertension and diabetes. There was no difference in total cholesterol or LDL. Average HDL cholesterol was higher in the HRT group. Average CAC score was significantly lower in the HRT group (119.2 ± 322.2 vs. 72.1 ± 223.3; p<0.001) for the entire population and for every separate age group, divided by 5 year intervals. In multiple logistic regression analysis, after adjusting for age and cardiac risk factors, HRT therapy was associated a higher prevalence of CAC 0 (HR 1.2; 1.03-1.41; p=0.02) and a lower prevalence of high CAC scores >399 (HR 0.63; 95% CI 0.44-0.88; p=0.007). During follow-up 6.3% of the patients died. HRT usage was associated with lower mortality rates (5.8% vs. 6.8%). After adjusting for age, cardiac risk factors and CAC score, the use of HRT was significantly associated with reduced long-term mortality risk (HR 0.7; 95% CI 0.49-0.98; p=0.043).

Conclusions: In a large contemporary cohort of post-menopausal women, HRT usage was associated with lower CAC scores. After adjusting for cardiovascular risk factors as well as extent of atherosclerosis, HRT was associated with lower all-cause mortality.