Correspondence

Letter by Heston Regarding Article, “Comparative Effectiveness of Exercise Electrocardiography With or Without Myocardial Perfusion Single Photon Emission Computed Tomography in Women With Suspected Coronary Artery Disease: Results From the What Is the Optimal Method for Ischemia Evaluation in Women (WOMEN) Trial”

To the Editor:

I read with great interest the study by Dr Shaw and colleagues looking at exercise treadmill testing versus exercise myocardial perfusion imaging in symptomatic women. The study concluded that, for symptomatic low-risk women with suspected coronary artery disease, the diagnostic strategy of initial exercise myocardial perfusion imaging was no better than initial exercise treadmill testing. This seems like a reasonable clinical approach, but this conclusion appears to be only weakly supported by the data presented in the study.

The authors state that the study’s power was 15%, so if a clinically significant difference was truly present, it would be detected only 15% of the time. More likely than not, a true clinically significant difference would be missed when the power is so low. In low-powered studies, absence of evidence is not evidence of absence.

This study also raises another important issue regarding surrogate variables. In this study, the choice of a medical test was used as a surrogate for changes in clinical management. Medical tests alone do not directly change clinical outcomes; rather, changes in clinical management and patient behavior is what affects patient outcomes. In this nonblinded study, we must entertain the possibility that patients with a normal exercise treadmill test were clinically managed differently than patients with normal exercise myocardial perfusion imaging. Although we never are able to gather all possible relevant variables in a clinical research study, not knowing how test selection affected clinical management is problematic and creates a significant barrier to understanding the data presented.

Finally, because neither test was clearly found to be clinically superior, it makes one wonder whether or not either test was useful. In low-risk symptomatic women, it seems possible that risk factor reduction alone without testing for ischemia would result in similar clinical outcomes.

Optimal test selection is an important component of practicing good medicine. It is my hope that these authors continue their research investigating these vital issues affecting the health of our patients.

Disclosures

None.

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References


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