

Women at higher risk than men of kidney damage after heart imaging test

April 28 2011

Women are at higher risk than men of developing kidney damage after undergoing a coronary angiogram, according to a Henry Ford Hospital study.

Researchers found that women are 60 percent more likely than men to develop radiocontrast-induced [nephropathy](#) (RCIN), an adverse side effect that causes [kidney dysfunction](#) within 24 to 72 hours after patients are administered an iodine contrast dye during the common heart imaging test.

This is believed to be the first study in which researchers investigated whether gender played a role in patients developing RCIN after undergoing a coronary angiogram. RCIN is the third-leading cause of hospital-acquired [kidney damage](#) in the United States, after surgery and hypertension.

The study is being presented Wednesday at the National Kidney Foundation's Spring Clinical Meeting in Las Vegas.

While researchers say further study is needed to explain the gender risk, they theorize that a woman's size may be a factor, says Javier Neyra, M.D., an Internal Medicine resident at Henry Ford and the study's principal investigator.

"Because men and women patients receive the same amount of dye during a coronary angiogram, it's possible the amount is just too much

for a woman's body to handle given her smaller size," Dr. Neyra says. "Perhaps a woman's height and weight ought to be factored into the dosage."

Dr. Neyra says the contrast dye may cause the kidney's [blood vessels](#) to narrow, thus causing damage to the organ. He says women with a history of [heart disease](#) should consult with their physician about undergoing heart imaging tests using contrast dyes.

Contrast dye is used to improve the visibility of internal body structures during an imaging test. In a coronary angiogram, the dye enhances images of the heart's blood vessels and chambers.

In the Henry Ford study, researchers followed 1,211 patients who received a [coronary angiogram](#) from January 2008 to December 2009. Nearly 20 percent of women developed RCIN compared to 13.6 percent of men.

Dr. Neyra says other contributing factors in the gender risk could be age, hormonal levels and other chronic conditions. "We just don't know without further study," he says.

Provided by Henry Ford Health System

Citation: Women at higher risk than men of kidney damage after heart imaging test (2011, April 28) retrieved 28 April 2024 from <https://medicalxpress.com/news/2011-04-women-higher-men-kidney-heart.html>

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