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DRUG TREATMENT MAY HELP RESTORE KIDNEY FUNCTION IN PATIENTS WITH RENOVASCULAR DISEASE

Medication is currently available for treating pulmonary hypertension

Highlights

- A type of drug called an endothelin-A antagonist promotes the recovery of kidney function and improves responses following renal angioplasty in pigs with a disease frequently observed in patients in which the kidneys' arteries are blocked.
- Endothelin-A antagonists are currently available for treating a certain type of hypertension.

Washington, DC (November 6, 2014) — A drug that's currently available for treating a certain type of hypertension may help patients with a kidney condition that can lead to heart problems and premature death, according to a study appearing in an upcoming issue of the *Journal of the American Society of Nephrology* (JASN).

Chronic renovascular disease can occur when there is significant obstruction of the renal arteries, usually due to atherosclerosis. This condition can lead to progressive deterioration of kidney function, as well as heart attacks, strokes, and even death. Treatments include the use of drugs as well as renal angioplasty and stenting, an intervention to open the blocked arteries. Unfortunately, kidney function does not recover in almost 50% of the patients who receive these treatments.

Alejandro Chade, MD (University of Mississippi Medical Center) and his colleagues tested the potential of a clinically available drug (called an endothelin-A antagonist) that can block the effects of a powerful vasoconstrictor called endothelin. By using a pig model of chronic renovascular disease and employing high-resolution CT imaging to determine the effects of treatment, the researchers found that the endothelin-A antagonist could greatly enhance the recovery of kidney function following renal angioplasty and stenting.

"Our results support a new therapeutic use for an existing drug and a potential novel therapeutic strategy for chronic renovascular disease," said Dr. Chade. "The findings of

our study have the likelihood of translation into clinical studies, and the clinical application of this research is our ultimate goal.”

Study co-authors include Nathan Tullos, PhD, Nicholas Stewart, MS, and Bret Surles, MS.

Disclosures: The authors reported no financial disclosures.

The article, entitled “Endothelin-A Receptor Antagonism after Renal Angioplasty Enhances Renal Recovery in Renovascular Disease,” will appear online at <http://jasn.asnjournals.org/> on November 6, 2014.

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Founded in 1966, and with more than 15,000 members, the American Society of Nephrology (ASN) leads the fight against kidney disease by educating health professionals, sharing new knowledge, advancing research, and advocating the highest quality care for patients.

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