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ISET NEWS BRIEFS

Scientific Sessions, Clinical Reviews and Trial Updates

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Interventional Treatment Short-Circuits Hypertension

The kidneys play a central role in the long-term control of blood pressure, so the kidney is a major target of medicines used to control high blood pressure (hypertension). However, more than a third of the 75 million Americans with hypertension are unable to control the condition, despite taking medication. Uncontrolled hypertension can lead to stroke, heart disease, vascular disease, heart failure and kidney failure. A new minimally invasive therapy using radiofrequency ablation to short circuit nerves in the kidney arteries shows promise in treating uncontrolled hypertension. In research being presented at ISET, 70 patients, each of whom had uncontrolled hypertension despite taking three or more blood pressure medications, had the technique, called sympathetic renal denervation (RDN). One month after treatment, the average decrease in systolic blood pressure was 18 mmHg and in diastolic blood pressure was 11 mmHg. Blood pressure continued to improve, and the 34 patients who have reached 12-month follow-up had an average decrease in systolic blood pressure of 27 mmHg and in diastolic blood pressure of 11 mmHg. “This treatment may help people who have the worst of the worst disease – who have hypertension that medications just can’t control and who are most likely to suffer

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from stroke and heart disease,” said Krishna Rocha-Singh, M.D., medical director of Prairie Vascular Institute, Springfield, Ill., who is presenting results at ISET. “There are broader implications of this procedure, such as the possibility of using it to address other conditions, such as chronic kidney disease and heart failure. Another hope is that we eventually may be able to use this therapy to help patients with mild to moderate hypertension, without the use of drug therapy.”

Blood pressure is controlled by a combination of nerve signals and hormonal interactions between the brain, heart, blood vessels and kidneys. Hyperactive nerve signals from the kidneys may be a main cause of hypertension in many people, and nerves traveling to the kidneys are a key final common pathway needed to raise blood pressure. RDN treatment is used to interrupt these hyperactive signals between the kidney and the brain, leading to lower blood pressure. In the procedure, a tiny incision is made in the groin artery and a thin tube (catheter) with an electrode on the tip is inserted and advanced to the kidney arteries. The electrode is placed at up to six points along each artery, and low-dose radiofrequency energy is delivered to disable the surrounding nerves.

The International Symposium on Endovascular Therapy (ISET) is attended by more than 1,200 physicians, scientists, allied professionals and industry professionals from around the world. The meeting pioneered the use of live cases to promote the multidisciplinary treatment of cardiac and vascular disease by endovascular means. ISET is presented by the Baptist Cardiac & Vascular Institute, Miami. ISET 2010 is taking place Jan. 17-21 near Miami Beach, Fla. For more information, visit www.ISET.org.

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Editor's note: Study numbers are current as of January 12, 2010 and may change upon presentation at the ISET meeting.

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