



Press Release

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BEAT hunger with safe, nonsurgical weight loss treatment

Potential new intervention emerges as less invasive for morbidly obese individuals

VANCOUVER, British Columbia (April 3, 2016) — A safe, new, minimally invasive treatment, developed by interventional radiologists, led to sustained weight loss in severely obese people, according to research presented at the Society of Interventional Radiology’s 2016 Annual Scientific Meeting. Researchers said the treatment—bariatric arterial embolization (BAE)—could offer individuals a viable, safe alternative to surgical weight-loss treatments.

Researchers designed the Bariatric Embolization of Arteries for the Treatment of Obesity (BEAT Obesity) pilot clinical trial to evaluate the safety and effectiveness of bariatric arterial embolization, or BAE, as a minimally invasive, image-guided treatment option for obese people struggling with weight loss.

“These early results demonstrate that BAE appears to be effective in helping patients lose a significant amount of weight in the short and intermediate term,” said Clifford Weiss, M.D., FSIR, associate professor of radiology and radiological science and director of interventional radiology research at the Johns Hopkins University School of Medicine. “Compared to a surgical gastric bypass procedure, BAE is significantly less invasive and has a much shorter recovery time.”

BAE targets a specific portion of the stomach (the fundus), which produces the vast majority of the body’s most powerful hunger hormone, called ghrelin. BAE is performed exclusively by interventional radiologists, who use image guidance and catheters to access the specific blood vessels to this portion of the stomach through a small nick in the skin at either the groin or wrist. The physician then injects microscopic beads to decrease blood flow to that portion of the stomach, thereby suppressing some of the body’s hunger signals, leading to reduced appetite and weight loss.

Weiss and his team enrolled seven severely obese, but otherwise-healthy, adults with a body mass index (BMI) ranging from 40 to 60, far above the obesity threshold level of BMI of 30. The researchers worked collaboratively with a multidisciplinary team that included weight loss physicians, hormone specialists, gastroenterologists and surgeons. All study participants were enrolled in the Johns Hopkins Weight Management Center so they could understand and implement critical lifestyle and diet changes before and after the procedure. After the treatment, researchers tracked the subjects’ weight loss, ghrelin levels, hunger and satiety assessments, quality-of-life (using surveys), blood pressure, and adverse events at one-, three- and six-month marks.

In these first seven patients, bariatric embolization was safe, with no major adverse events. All patients demonstrated weight loss and dramatic hunger reduction levels after the procedure. Ghrelin levels trended down, and quality-of-life scores improved.

In the first month following BAE, participants had an average excess-weight loss (the percentage loss of the pounds above the patient's ideal body weight) of 5.9 percent. After six months, the participants' excess-weight loss increased to an average of 13.3 percent.

"Obesity is a highly prevalent, detrimental and costly disease in the U.S. and abroad," Weiss said. "Currently, interventions to treat this condition include behavioral modifications, diet and exercise, medications, and surgery. We're excited about the promise of bariatric arterial embolization as another tool for health care providers to offer patients in the effort to curb this epidemic. As this study expands and includes more patients, we will be able to gain more insight into the efficacy of BAE and the role interventional radiology can play in the critical battle against obesity."

Weiss stressed that this research is still in its early stages. Now that the safety of this procedure has been demonstrated, more clinical trials are needed to evaluate larger numbers of patients to determine the treatment's efficacy and durability over time.

Abstract 14: "Bariatric Embolization of Arteries for the Treatment of Obesity (BEAT Obesity): Three Month Safety and Efficacy Data." C. Weiss, O. Akinwande, K. Paudel, L. Cheskin, B. Holly, K. Hong, E. Shin, K. Steele, T. Moran, D. Kraitchman, Johns Hopkins University School of Medicine; A. Fischman, R. Patel, Icahn School of Medicine at Mount Sinai Medical Center; A. Arepally, Piedmont Healthcare. SIR Annual Scientific Meeting, April 2–7. This abstract can be found at sirmeeting.org.

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About the Society of Interventional Radiology

The Society of Interventional Radiology is a nonprofit, professional medical society representing more than 6,100 practicing interventional radiology physicians, scientists and clinical associates, dedicated to improving patient care through the limitless potential of image-guided therapies. SIR's members work in a variety of settings and at different professional levels—from medical students and residents to university faculty and private practice physicians. Visit sirweb.org.

The Society of Interventional Radiology is holding its Annual Scientific Meeting April 2–7 at the Vancouver Convention Centre, British Columbia, Canada. Visit sirmeeting.org.

Interviews and medical illustrations are available by contacting SIR's communications department staff: Elise Castelli, SIR senior manager PR and communication, ecastelli@sirweb.org, (703) 460-5572, or Ellen Acconcia, SIR senior manager, web and content strategy, eaconcia@sirweb.org, (703) 460-5582.