## Obesity Worsens Chronic Venous Insufficiency

BY DOUG BRUNK

FROM THE ANNUAL MEETING OF THE AMERICAN VENOUS FORUM

SAN DIEGO – The manifestations of chronic venous insufficiency increase with higher body mass index, results from a national screening program showed.

However, venous abnormalities on screening duplex ultrasound were not correlated with increasing BMI.

"We did not find an increase in obstruction or venous reflux in higher-BMI individuals, which leads us to believe that obesity in and of itself is a contrib-

Major Finding: Mean venous thromboembolism risk-assessment scores significantly increased incrementally with body mass index (from 3.3 in the normal-weight group to 4.1 in the supermorbidly obese group), as did mean quality-of-life scores (from 20.3 in the normal-weight group to 29.0 in the supermorbidly obese group).

**Data Source:** An analysis of 7,227 National Venous Screening program participants.

**Disclosures:** Dr. Moore said that she had no relevant financial conflicts to disclose.

utor to chronic venous disease in the absence of valvular insufficiency," Dr. Colleen Moore said at the meeting.

To determine differences in venous disease across a spectrum of BMI, Dr. Moore and her associates analyzed results from the National Venous Screening program. The program, launched by the American Venous Forum in 2005, was designed to educate participants about venous thromboembolism (VTE) risk, varicose veins, and chronic venous insufficiency through screening, literature, promotional materials, and an interview with a venous expert.

"The program strives to identify those at risk for VTE, the presence of venous obstruction or reflux on a modified duplex ultrasound, and the presence of chronic venous insufficiency based on a quick leg inspection," said Dr. Moore, of the vascular surgery department at Southern Illinois University, Springfield.

Dr. Moore and colleagues divided participants into six BMI categories and collected several data points for comparison, including demographic and health information, a VTE risk assessment, venous quality of life with the Chronic Venous Insufficiency Questionnaire 2 (CIVIQ2), and an abbreviated duplex ultrasound. Participants also underwent a lower-extremity inspection and were assigned a CEAP classification.

Dr. Moore presented findings from 7,227 people who have been screened since 2005. Of these, 1.3% were underweight (less than 18.5 kg/m²), 34.9% were normal weight (18.5-24.9), 34.8% were overweight (25-29.9), 16.6% were obese (30-34.9), 7.7% were morbidly obese (35-39.9), and 4.7% were super-

morbidly obese (greater than 40).

The prevalence of diabetes significantly increased incrementally with BMI (from 4.9% in the normal-weight group to 25.2% in the supermorbidly obese group), as did the prevalence of hypertension (from 22.9% to 54.3%, respectively).

Mean VTE risk-assessment scores significantly increased incrementally with BMI (from 3.3 in the normal-weight group to 4.1 in the supermorbidly obese

group), as did mean quality-of-life scores (from 20.3 to 29.0, respectively). "We looked at social activities such as the ability to play sports or do housework," Dr. Moore said. "As you become heavier those scores increase, indicating a worse quality of life, and are statistically significant compared with the normal-weight individuals."

Mean CEAP scores significantly increased incrementally with BMI (from

1.4 in the normal-weight group to 1.9 in the supermorbidly obese group), as did mean venous clinical severity scores (from 2.6 to 4.3, respectively).

To watch a video interview from the meeting with Dr. Moore, scan this QR code using a smartphone.



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