Doctors predict benefits of ultrasound enhancing agents

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CHICAGO (BUSINESS WIRE) -- Doctors today described new ways to predict whether specific patients will benefit from the use of ultrasound enhancing agents (UEAs) to improve the accuracy of their ultrasound scan for diagnosis of heart disease, the number one killer of Americans.

“With increasing obesity and demographic trends that can interfere with ultrasound image quality, we are finding that the use of UEAs to salvage suboptimal images is not keeping up with the need for UEAs,” according to Dr. Jordan Strom, an Assistant Professor of Medicine at Harvard Medical School who spoke today at the 35th Advances in Contrast Ultrasound conference in Chicago. Dr. Strom also is a member of the board of directors of the International Contrast Ultrasound Society (ICUS).

“We now know that UEAs are extremely safe, they reduce the net cost of medical imaging and they can change patient outcomes, and yet they are vastly underutilized in clinical practice,” he said.

Dr. Strom said that an analysis of more than 220,000 patients over 18 years at Beth Israel Deaconess Medical Center in Boston, which is affiliated with Harvard Medical School, showed that age, weight and heart rate can determine which patients should receive a UEA to enhance their ultrasound scans and improve the accuracy of their diagnosis.

He said his study was externally validated by Mid-America Heart Institute in Kansas City, which uses UEAs in nearly 25 per cent of its ultrasound scans of the heart.

“Minutes matter, and in a busy echocardiography laboratory that performs 40 ultrasound exams each day, we can save time and improve our workflows by looking at these three variables before the patient presents for his scan.”

Doctors also were encouraged to use UEAs to enhance ultrasound images of carotid arteries.

“Contrast enhanced ultrasound is a robust, emerging and important biomarker of atherosclerotic plaque, and finding plaque predicts risk,” according to Dr. Amer Johri, a Canadian cardiologist at Queens University in Kingston, Ontario. Dr. Johri also spoke at the conference.

UEAs (sometimes also known as “ultrasound contrast agents”) are injected during an ultrasound scan to enhance the resolution of an ultrasound image of the heart and other organ systems. UEAs contain suspensions of microscopic gas-filled microbubbles that are smaller than red blood cells and reflect ultrasound signals as they flow through the microcirculation and are expelled from the body within minutes after injection. UEAs contain no dye and present no known risk of liver or kidney damage.

Dr. Strom also called for empowering trained sonographers to participate in making decisions to use UEAs and the administration of intravenous lines. He also encouraged echocardiography laboratories to implement standing orders that can help improve work flow efficiencies.
Three UEAs are currently used in the United States -- Definity (Lantheus Medical Imaging), Lumason (Bracco) and Optison (GE Healthcare).

ABOUT ICUS:

The International Contrast Ultrasound Society (ICUS) is a grassroots, non-profit medical society dedicated to advancing the safe and appropriate use of contrast enhanced ultrasound (CEUS) to improve patient care. ICUS members include physicians, scientists, and other ultrasound imaging professionals in approximately 60 countries. For more information about ICUS, please visit www.ICUS-SOCIETY.org.

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