How Can Advanced Imaging Studies Enhance Diabetes Management?

Diabetes Technology & Therapeutics

New approaches to applying noninvasive imaging tests such as computed tomography (CT), magnetic resonance (MR), and positron emission tomography (PET) may play a bigger role in evaluating and managing patients with diabetes. Advances in noninvasive imaging technology can assess important changes in fat composition and distribution in the body that may affect the metabolic complications and diseases associated with diabetes, including cardiovascular disease and cancer. A forward-looking Review article on "Obesity and Diabetes: Newer Concepts in Imaging [1]" in Diabetes Technology & Therapeutics (DTT), a peer-reviewed journal from Mary Ann Liebert, Inc., publishers, highlights these emerging advances. The article is available on the Diabetes Technology & Therapeutics [2] website.

Kavita Garg, MD, Samuel Chang, MD, and Ann Scherzinger, PhD, University of Colorado Denver School of Medicine, Aurora, describe how sophisticated imaging techniques can be used to quantify body fat in different locations in the body. It can also help distinguish between different types of fat, which can have different effects on metabolism and pose different disease risks. In their Review article, the authors suggest that noninvasive imaging tests may be able to replace the need for biopsies, aid in early disease detection, and identify not only structural but also functional abnormalities in tissues such as heart muscle before a disorder becomes symptomatic.

"Currently, imaging techniques are not routinely done in people with diabetes," says Viswanathan Mohan, MD, WHO Collaborating Centre for Non-Communicable Diseases Prevention and Control and IDF Centre for Education, Gopalapuram, Chennai, India, in his accompanying Editorial, "Has the Time Come for Routine Imaging Studies in Diabetes? [3]" With the changing profile of the complications of diabetes and increased incidence of diseases related to diabetes and diabetes therapies, "the article by Garg et al. is a trend-setter because this could change the way we routinely screen for these conditions in people with diabetes."

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