

### Transcript Details

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### Announcer:

You're listening to *GI Insights* on ReachMD, and this episode is sponsored by Siemens Healthineers. Here's your host, Dr. Charles Turck.

### Dr. Turck:

This is *GI Insights* on ReachMD. I'm Dr. Charles Turck, and joining me to share strategies for the management of liver disease in patients with diabetes is Dr. Sujit Janardhan who's an Assistant Professor in the Department of Internal Medicine, Division of Digestive Diseases and Nutrition, and the Department of Transplant Surgery at Rush University Medical Center.

Dr. Janardhan, welcome to the program.

### Dr. Janardhan:

Thank you so much for having me.

### Dr. Turck:

To start us off, Dr. Janardhan, would you explain why consistent screening for liver disease is so important in patients with diabetes?

### Dr. Janardhan:

Absolutely. So patients with diabetes do have a significant risk for developing more advanced liver disease, and the disease that they're most particularly at risk for is something that we have now termed, "steatotic liver disease." The traditional name for this disease was, "nonalcoholic fatty liver disease," but as of literally last weekend, we've changed the name to steatotic liver disease. There's a lot of reasons why we've changed this name. Nonalcoholic fatty liver disease is a term that's just laden with stigma between the term "fatty" in a metabolic disease, as well as the "nonalcoholic" component. It's just not an ideal name. But more importantly, it doesn't fully reflect the nature of the disease or the things that can drive it. So the new name for NAFLD, or nonalcoholic fatty liver disease, is now metabolic dysfunction-associated steatotic liver disease. Now that certainly is a mouthful. Steatosis refers to fat in the liver, and so we are still highlighting the fact that this is a disease that's caused by fat in the liver, but the important part is the first part—the "metabolic dysfunction-associated." That implies that this disease is part of the metabolic syndrome, and it's part of metabolic diseases and that this disease drives other metabolic diseases, and other metabolic diseases drive this disease, so they're all interrelated.

By changing that name, it further highlights that patients with diabetes, another metabolic disease, are at risk for developing liver disease from, again, steatotic liver disease. So we know that roughly 50 to 70 percent of patients with diabetes can develop steatotic liver disease and that they're much more at risk for developing the more aggressive form of steatotic liver disease, known as steatohepatitis, where there is not just fat in the liver but inflammation and scarring, and that can even lead to cirrhosis and liver failure.

### Dr. Turck:

And is there any evidence to suggest how early detection could impact the outcomes in these patients?

### Dr. Janardhan:

Absolutely. So the beautiful thing about the liver is that it has the ability to regenerate, and it has the ability to heal itself. When we're able to detect steatotic liver disease in its early stages, we're able to intervene on the disease through either simple measures, such as lifestyle changes or particular medications. It's important to note that there is no current FDA-approved medication to treat steatotic liver disease, but there are medicines that are in clinical development, so if a person does have a more advanced disease from MASLD, as we call it, we could refer those patients to clinical trials or even think about more aggressive strategies, such as bariatric surgery. It's important to note that if we can remove the cause of the liver damage—so remove the cause of the scarring that's occurring in the liver

or even remove the cause of the cirrhosis—there is a chance that that scarring and damage can regress. But once that scarring reaches the point of cirrhosis, and certainly once it reaches the point where the liver starts to fail a condition we know as decompensated cirrhosis, it's very hard to reverse the damage that's there to a point where the patient can go back to feeling normal. So that's why it's so important to screen. A lot of patients have this disease. So when we talk about the population, 35 percent of the North American population has fat in their liver, or steatotic liver disease. So any screening strategies that we talk about need to be cognizant of the fact that this is a massive population. So from an economic standpoint, we have to think about that.

But the important thing to note here is that 30 percent of people with steatotic liver disease have that more dangerous version of fat in their liver, called steatohepatitis, or metabolic dysfunction-associated steatohepatitis, which we refer to as MASH. So that's the population that we really need to target. That's the population that we want to be aggressive with identifying and treating.

**Dr. Turck:**

Now if we zero in on a particular patient population for just a moment, would you talk about the prognosis and clinical data around liver disease in pregnant patients at risk for, or with, confirmed gestational diabetes?

**Dr. Janardhan:**

Yeah, there's actually been a lot of studies that have been released recently that highlights this population. So there was a study in 2019 that showed that patients who have had gestational diabetes are 2.5 to 2.7 times more likely to develop steatotic liver disease, so fat in their liver, than patients who have never had gestational diabetes. And in terms of the more dangerous version of steatotic liver disease, or steatohepatitis, it seems that patients who have steatohepatitis are about 25 percent more likely to have had gestational diabetes in the past compared to patients who do not have steatohepatitis. That was a study that actually was just recently released in March of 2023.

But the presence of fat in the liver during pregnancy has also been associated with adverse maternal and perinatal outcomes. So patients who have NAFLD during pregnancy are at increased risk for gestational diabetes. But they're also at risk for hypertensive complications, postpartum bleeding, as well as preterm birth. So liver disease, especially steatotic liver disease, can have a really significant impact on pregnancy. And the opposite is also true, gestational diabetes can have a really significant impact on steatotic liver disease.

**Dr. Turck:**

For those just joining us, this is *GI Insights* on ReachMD. I'm Dr. Charles Turck, and I'm speaking with Dr. Sujit Janardhan about the importance of maintaining liver health in patients with diabetes.

**Dr. Turck:**

So, Dr. Janardhan, if we turn our attention to management strategies, what are some key takeaways from the AACE guidelines?

**Dr. Janardhan:**

That's a great question. The AACE recently partnered with the AASLD, or the American Association for the Study of Liver Disease. Similarly, the American Diabetic Association partnered with the American Gastrologic Association, and both came out with joint guidelines regarding the treatment of what was formerly known as nonalcoholic fatty liver disease now metabolic dysfunction-associated steatotic liver disease. So the nice thing about that is both of those guideline statements are pretty concordant and the principles are the same. So the general principle that we want to follow from both of these guidelines is that we want to identify the patients that are at highest risk.

Again, 35 percent of the North American population has this disease. So we can't think about screening that massive, massive, massive population, or referring them to treatment. There's just simply not enough providers to do that. But what we want to do is identify the patients that are at highest risk. So we can identify those patients that are at highest risk with certain clinical characteristics. So patients with diabetes, they fall into a high risk category. The other patients are patients with other metabolic disorders, so greater than two other components of the metabolic syndrome. Those patients are at increased risk for more advanced liver disease from steatohepatitis. Also, patients who have steatosis, or fat in their liver, who also drink a moderate amount of alcohol. So there's a new concept in this nomenclature, called "MET-ALD," which is metabolic syndrome-associated steatotic liver disease in combination with alcohol-related liver disease. We recognize the patients who have metabolic syndrome might also drink more than moderate amounts of alcohol, and vice versa is also true. But what we know is that patients who have fat in their liver from metabolic causes are more at risk for developing damage from alcohol. So if we think about this in a functional way—if metabolic syndrome-associated liver fat is causing the damage of, let's say, one, and alcohol-related liver fat causes the damage of one, it's not one plus one equals two, it's one plus one equals three or four. These two disorders are synergistic. So the people who have metabolic risk factors who also have a moderate or more than a moderate amount of alcohol use are at increased risk for advanced fibrosis, and that's another population that we want to screen.

And then finally, anyone who has a family member who's developed cirrhosis from steatotic liver disease, or MASLD, metabolic dysfunction-associated steatotic liver disease, has a twelvefold increased risk of developing advanced liver disease. So those patients should also be screened.

**Dr. Turck:**

And how can we use shared decision making to address the burden associated with comorbid diabetes and liver disease?

**Dr. Janardhan:**

I really appreciate you asking that question. In addition to my training as a liver specialist, I'm also board certified as an obesity medicine specialist, and I run an obesity program that's embedded within our liver clinic. I have to tell you that the most effective way that I work with patients in terms of lifestyle management is letting the patients drive the bus. The most effective way for patients to be successful is that they come up with the strategies and the techniques that they're going to use in order to be successful with their lifestyle changes. Now of course, we use motivational techniques to help patients achieve the goals that they set, and we do advise them on particular strategies that might be more effective given their clinical background. But we really want patients to be the ones that are driving the bus or running the program. And the same is true when it comes to diagnosing, managing, and treating steatotic liver disease or MASLD. I think the cornerstone to this is just education. There's a lot of people that don't know that steatotic liver disease, or the traditional term MAFLD, even exists, and people have been traditionally told that fat in the liver is not a big deal. And we do note that for 70 percent of patients with fat in the liver, from a liver standpoint the prognosis is very good, it's still a cardiovascular risk factor. So it does increase your risk of heart attacks and strokes, but the liver prognosis can be reasonable. But think about the denominator of patients that we're talking about. So when we talk about 35 percent of the population has fat in the liver, that's three times more common than diabetes. So even if we just take that 30 percent of that group that has more advanced liver disease in the form of steatohepatitis, that's a ton of people that will be developing a lot of damage.

That's the reason why this disease is going to be the number one cause of liver transplants in the next few years and is already the number one cause of liver transplants for certain patient populations, such as women.

**Dr. Turck:**

Well, this has been an excellent discussion, and I want to thank my guest, Dr. Sujit Janardhan, for joining me to talk about how we can best approach liver disease in patients with diabetes.

Dr. Janardhan, it was great having you on the program.

**Dr. Janardhan:**

Thanks so much for having me.

**Announcer:**

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