

Transcript Details

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Digesting the Latest in Vaccinations: IBD Patients & the COVID-19 Vaccine

Dr. Nandi:

You're listening to GI Insights on ReachMD. I'm Dr. Neil Nandi, and I recently spoke with Dr. David Rubin, the Section Chief of the Division of Gastroenterology, Hepatology, and Nutrition, and the Co-Director of the Digestive Diseases Center at the University of Chicago. Here's Dr. Rubin, discussing the characteristics of the Pfizer, Moderna, and Johnson & Johnson COVID-19 vaccines, and what they mean for our IBD patients.

Dr. Rubin:

The first thing to know is that the vaccines, whether we're talking about Pfizer, Moderna, or the Johnson and Johnson vaccine, all have received what's called emergency use authorization. That's different than approval from the FDA because they haven't finished their longer-term follow-up.

On the other hand, emergency use authorization means that obviously they have been authorized for use. And secondly, that it's in a situation that's deemed an emergency, which we'd all agree our pandemic has been. But it doesn't abbreviate or cut short the need for appropriate review, first by an advisory committee which makes a recommendation to the FDA, and then by the appropriate FDA personnel. And that includes looking carefully at safety and efficacy. Remember, the FDA historically was created for safety. Efficacy came later, but it's a very important point. So, their appropriate review was performed.

Also, all three vaccines were developed with an extraordinary statistical power in a large number of patients. What we want to know about, of course, are people with immune diseases who are on immune therapies. They were not included in those studies. So we want to make sure we understand what might be the implications for our patients. Pfizer and Moderna are both messenger RNA vaccines that use a small component of RNA that is in a lipid nanoparticle that is then incorporated into the machinery of the cell to manufacture the spike protein, which triggers an immune response. The target of the J&J vaccine is also the spike protein but uses DNA to do the same thing. Neither the Pfizer nor the Moderna vaccine have any durable effect in the body from the standpoint of the messenger RNA. It degrades rapidly and is gone within a few days. What it does do is it induces an immune response, which is then augmented by a booster, which occurs with a second injection three or four weeks after the first.

The Johnson and Johnson vaccine is an attenuated virus delivery system that doesn't replicate. That particular virus can't do anything in your body, it's just used as a carrier to deliver the sequence that triggers the creation of a spike complex that our body reacts to. It is only a single injection. So one dose.

Now, all three have various levels of data that amazingly show that they prevent transmission of virus too, because one of the things we're worried about is you could be a carrier of the virus even if you're not getting sick. And it looks like that's reduced by effective vaccination too. Amazing.

The question about IBD, of course, is will our patients tolerate it? Is it safe? And will they develop appropriate immunity? I'm here to tell you that we have the first experience of that, which is being driven by the Mount Sinai Hospital in New York, but multicenter involvement. And so far, in a small number of our IBD patients and a growing number of people who are recording it and experiencing it, it looks like our IBD population develops the same immune titers as the non-IBD population regardless of therapy, which is a very good message, and what we kind of expected, which is that many of the therapies we use for IBD would not affect how a messenger RNA or an attenuated virus vaccine induces immunity.

The other very important message to know is that this doesn't trigger an immune response in IBD patients. They're not more likely to have adverse reactions. And there are now good data that this works very well against the UK variant because the variant, although

more infectious and potentially more severe, has the same spike protein as the target of these vaccines, and therefore, they work just as well for that variant. But we've got to get vaccinated.

So our recommendation - this came from the International Organization for IBD, and I was part of this. The consensus vaccination recommendations, internationally published in *Gut*, is that everyone with IBD should get vaccinated with any one of these three when it's available to them.

Dr. Nandi:

That was Dr. David Rubin, discussing the characteristics of the three COVID-19 vaccines, and what they mean for our IBD patients. For ReachMD, I'm Dr. Neil Nandi, and to hear my full conversation with Dr. Rubin and to find other programs in our series, visit ReachMD.com/GIInsights, where you can be part of the knowledge. Thanks for listening!