VDM Vascular Disease Management

INTERVIEW

# An Overview of New and Upcoming Embolics

*An Interview With Justin Guan, MD*

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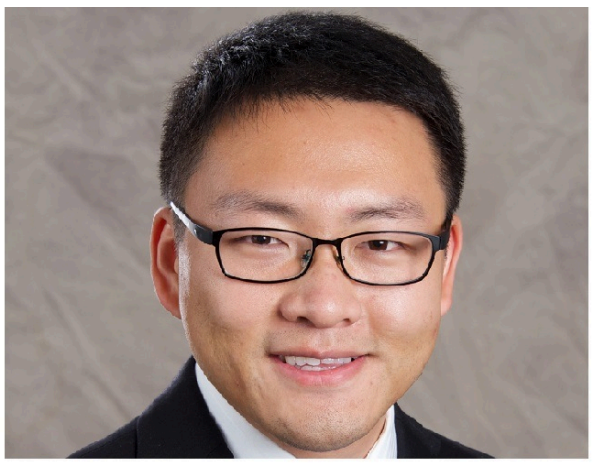

***Justin Guan, MD***
*Cleveland Clinic, Cleveland, Ohio*

At the 2024 SIR Meeting in Salt Lake City, Utah, interventional radiologist Justin J. Guan, MD, from the Cleveland Clinic in Cleveland, Ohio, presented several sessions, including “An Overview of New and Upcoming Embolics.” *Vascular Disease Management* spoke with Dr. Guan about his presentation and how these new embolics can improve patient outcomes.

***Dr. Guan, tell us about the presentation on embolics that you gave at SIR.***

My presentation was part of the “New Frontiers in Embolization” session. We were trying to touch on the newest embolics available on the market in different categories, and also talk about different cutting-edge techniques that are being used and how those embolics are being utilized.

My talk was an overview of the different types of new embolics. I went through the different categories and talked about examples of ones recently made available or coming down the pipeline, as well as limitations of prior embolics these new agents try to address. For instance, talking about particles, the issue is a lot of the particles we had before were not visible with x-rays, and every time we had to mix them with contrast or lipiodol. A lot of the embolics are being researched to make them more visible on x-ray. The LC Bead LUMI (Boston Scientific) have attached iodine moiety, so they can be seen under x-ray, and ideally under computed tomography. So, in situations like post-TACE evaluations, you don't have to mix with lipiodol to make it visible.

Another limitation is when we get into resorbable particles. We've been using Gelfoam, or Gelfoam powder, autologous blood clots, and they're not calibrated into specific sizes so they don't have as much consistency in occluding specific vessel sizes. Now we have gel beads, which have been available for a few years.

I also spoke about coils—there are many different types of Azur hydrocoils (Terumo), and the newest one is the HydroPack, which is softer, packs really well, and expands to better occlude the vessel. And Embold (Boston Scientific) has a nitinol delivery wire technology that prevents it from being kinked and it can be used in a great range of different microcatheter sizes, really addressing limitations.

With liquids, there are many new agents out now that are approved for peripheral use—ones that have attached radio-opaque molecules so you don't have to mix them with a tantalum, and then there’s the Obsidio (Boston Scientific), which is in its own category of conformable embolic that behaves in between liquid and solid. It's very easy to inject it into small branches in bleeds and emergent situations.

***What do you think are the most exciting new products in embolics right now?***

The most exciting new things, I think, are in the realm of liquid embolics, or conformable embolics. Before, when we get into bleed embolizations, like GI bleeds, and organ bleeds from lacerations, we've been using coils because they are safer in terms of distal organ ischemia. The downside of liquids is that we can't control where it flows sometimes; if we use alcohol or glue, they may go into a very distal branch and cause end-organ ischemia, skin ischemia. Coils are very safe because they don't go into the distal branches, and there's still the ability for that end organ to recruit more vessels. But now with the newer developments of liquid embolics such as the LAVA (Sirtex), which is approved for peripheral use, it's more viscous than glue or alcohol; with Obsidio, you

can better control where it ends up and plugs the vessel, it’s also become an acceptable option. So now there’s a shift, where for distal organ branches where we previously avoided liquids, now we have certain agents that are safe. For patients with coagulopathies or in DIC coils don't work very well because they depend on the bloods ability to thrombose. Now, with newer technologies that can more efficiently occlude vessels, safe and effective options are expanding. So I think there's a shift going on compared to prior teachings, with the newer technology addressing some limitations of previous embolics, making it possible now to use new things that before were kind of taboo. Now there's just an explosion of new options coming out, so we have to keep ahead of the development to understand what the best option is for each scenario and help the patient the best.

***What's the one takeaway that you wanted the audience to get from your presentation?***

The one takeaway is that it's important to know the strengths and weaknesses of every embolic, because try as we might, there's no one thing that's going to fix every single situation. As interventional radiologists, we need to read up on the developments, learn about them in conferences, and try them out so we can make the best decision as to what to use for each patient. ■

For more information on the latest in embolics, read the article by Dr. Guan and Dr. Jafar Golzarian, “Embolics Review: Current Options and Agents in the Pipeline.”

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