

**DAVID ZHAO:** I'm Dr. David Zhao. I'm one of the interventional cardiologists at Wake Forest Baptist Health. What we're doing today is try to repair a mitral valve without surgery. It's called a "mitral clip procedure."

This is an echocardiogram. Dr. Pu is doing a transesophageal echo. And as you can see, this is a 3D echo. It basically shows you there's a significant mitral regurgitation, as you can tell-- the very colorful jet. And this is abnormal. In someone with a mitral regurgitation, the blood flow basically goes backwards.

What we wanted to do today is use this mitral clip to repair it to eliminate mitral regurgitation. What we're doing right now is trying to do a transseptal puncture, basically trying to go from the right side of the heart to the left side of the heart. And we got that in successfully. The next step is to prepare the device.

And as you can see, we are flushing the device to get rid of the air and also trying to make sure that the device works. As we prep the device, then we will advance through a catheter, as you can see here-- and already in place in the heart. And the device will go through this catheter and advance to the mitral valve.

As we are doing that, Dr. Pu will monitor with ultrasound. We basically place the device as the guidance by the ultrasound, as well-- so by the angiogram. As you can see from the monitor, the top one is the angiogram. The bottom is the ultrasound. And now I have the same monitor, so I can see that, as well.

The goal is to try to put the clip in the place that has regurgitation so we can actually staple those two together to prevent the regurgitation. It takes a little bit of time to get the right place, right direction. That's why the ultrasound's very important. As you can see, my colleague, Dr. Pu, is showing me exactly where the clip is so I can position that carefully.

As we're done, we pull the catheter out. And we will reassess the effectiveness of the clip. Sometimes, we need more than one. So in this particular case, one reduced the mitral regurgitation to about three plus from four plus. But it's not perfect, so we're going to have to put a second one.

As you can see, we're preparing the second. This is what the clip looks like, and it's basically almost like a clamp structure. That is the one to capture the leaflet. We already had one in. This is the second one, so we can reduce mitral regurgitation even further. So as you can see, we're advancing the second one to carefully place it right next to the first one so we can have two of them hopefully to reduce mitral regurgitation even further.

Now we have the device in place. As Dr. Pu is evaluating the mitral regurgitation, as you can see, the very colorful jet disappeared. That means it's very effective. We're really successful in repairing the mitral regurgitation. Thank you.