York Clinical Cardiology

Contrast Echocardiography

For some people who require echocardiography (ultrasound imaging of the heart), the addition of intravenous contrast is recommended to improve image quality so that the test will be more accurate. Contrast is most often recommended after images obtained from an echocardiogram without contrast were insufficient to adequately define the heart anatomy. The addition of intravenous contrast enhances the picture quality and improves diagnosis.

The process involves the temporary placement of an IV (intravenous) catheter in order for the contrast agent to be injected safely into the vein, typically in or near the crease of the elbow. The contrast agent is then injected as the images are being obtained.

The contrast agent (*Definity*) is a lipid-based gas-filled microbubble solution that reflect the ultrasound waves in a way that creates a clearer picture of the heart. The bubbles dissipate within seconds to minutes and remain in the bloodstream for a very short duration.

Here's what you should know:

1) The process is relatively painless. The only part that might hurt a bit is the placement of the IV catheter, similar to the process of undergoing a blood test. Once the catheter is in place, you should not expect to feel any pain.
2) It helps to be well hydrated before the test, improving the likelihood that the most suitable vein will be identified and the process will be successful on the first attempt. Try to drink 500 mL of water (a small bottle) 1 hour before the test.
3) There is **no radiation exposure**.
4) Unlike with other contrast agents (i.e. for CT scans or MRIs), there is **no known meaningful risk to internal organs**, such as the liver or kidneys.
5) The procedure is very safe and complications are rare. There is an extremely small risk (less than 1 in 10,000) of developing an allergic reaction to the contrast agent used. If you have had allergic reactions to any medicines before, please inform us before starting the test. Specifically, allergy to PEG (polyethylene glycol) has been implicated. This is extremely rare.