Bubble saline contrast echocardiogram

What is a bubble saline contrast echocardiogram?

An echocardiogram is a safe, non-invasive procedure used to diagnose cardiovascular disease. It uses high-frequency sound waves to literally see the heart, the heart valves, and main blood vessels. This 'window' to the heart enables doctors to diagnose and follow-up a number of cardiovascular diseases, so they can treat patients appropriately.

A bubble saline contrast echocardiogram is similar but during this procedure a small amount of saline (sterile salty water) will be mixed with a small sample of your blood and will be agitated so that it contains many tiny bubbles of air.

This procedure gives a much clearer images of the heart as the bubbles reflect the sound waves helping enhance the pictures and the accuracy of the test.

The most common reason to perform this test is to help diagnose if you have any holes in the heart (blood flow that passes between the right and left atrium). An alternative reason is to know if there are extra communications (small holes) between blood vessels in your lungs (known as pulmonary arterio-venous malformation).

How is it done?

You will be supplied with a hospital gown, asked to undress to the waist and to lie on a couch on your left side. Sticky electrodes will be attached to your chest and connected to the echo machine to monitor your heart rate during the test. A Doctor or trained highly specialized Cardiac Physiologist will insert a cannula (small, thin plastic tube) into a vein in your arm or hand. An ultrasound probe and a small amount of gel are gently placed on your chest – please inform the operator if you feel any discomfort from the probe pressing on your chest.

The probe will collect images from your heart and will be recorded by the echo machine. At the appropriate stage of the procedure, the bubble saline contrast will be injected into the cannula. You may be asked to hold your breath for a few seconds during the test. If needed, the injections will be repeated several times. The introduction of these the bubble saline contrast into your circulation cause no harm but you may feel a 'cold rush' up your arm. The procedure is very safe and complications are rare. There are no associated allergic reactions with injection of the bubble saline contrast into the vein.

How long does an bubble saline contrast echocardiogram take?

An echocardiogram with bubble contrast takes approximately 45–50 minutes. You can return home straight after the test and may drive.

Will I be exposed to radiation?

No, ultrasound uses sound waves and is not radioactive.

Information for Patients

Should I take all my tablets?
You should take all your medication as normal.

What happens at the end of your scan?
Once the scan is complete you can get dressed and you will be free to leave. A report of the echocardiogram will be sent to the doctor who requested the echocardiogram.

Research and Audit
The University Hospital Birmingham is an institution involved in teaching and research. Some of the data collected during your scan may be used for audit to check on the quality of what we do and also to support research projects that do not involve further contact with you. If you do not wish us to use this data, please let us know when you attend for your appointment.

If you would like a chaperone during your procedure, please call the department and request this in advance. The department will arrange this on your request, as it cannot be a friend or relative, although they may be present if you prefer.

If you require this information in another format, such as a different language, large print, braille or audio version please ask a member of staff or email interpreting.service@uhb.nhs.uk