A Surgical Breakthrough

Mrs. Tripti Adhikari, a 72-year-old lady from Agartala, was diagnosed with Dilated Cardiomyopathy and complete heart block when she came to Medica Institute of Cardiac Sciences with chest pain and breathlessness. Dilated cardiomyopathy is a condition where the heart pumping goes down and patient develops recurrent heart failure. Gradually the dilated heart develops fibrosis, which leads to conduction abnormality.

This conduction delay further decreases the cardiac output as the contraction becomes non-synchronized. Biventricular pacemaker is implanted in these patients to synchronise the contraction of the heart, which is why the procedure is also called cardiac resynchronization therapy.

The patient underwent biventricular pacemaker surgery at Medica Superspecialty Hospital on 14th August. For the first time in India, in a landmark surgery, three leads were introduced successfully through the cephalic vein. The conventional way of doing the surgery is by introducing three leads through subclavian vein puncture. This procedure is risky as it can cause pneumothorx, haemothorax and lead fracture if the leads get trapped between ribs and clavicle. However, introducing the leads through cephalic vein negates all such complications.

The procedure, though safer, had not yet been tried in our country. Introducing a single lead is often a routine procedure, but insertion of three leads through the cephalic vein is an exception. Even internationally, the procedure has been adapted by only some centres in America and Europe.

The surgery was performed by Dr. J Naik, Dr. Dilip Kumar and Dr. S. Basu. All three leads were introduced in the same cephalic vein at different locations.

The patient started feeling better within hours of the procedure. With passing of time benefits of the surgery will become more visible due to remodeling of the heart as a consequence of the synchronized heart beats.

At Medica Institute of Cardiac Sciences one more biventricular case was performed on the same day on a patient who had mitral valve replacement done 10 years back. The patient had some anatomical distortion of coronary sinus but the final positioning and parameters of lead were satisfactory.

Both patients are doing well. Encouraged by their success, the interventional cardiologists involved with this case have decided to make this a norm at Medica. The doctors also have plans to demonstrate this technique at other centres in the city so that the procedure, which is greatly beneficial to patients, can be gradually adapted by them.