**IMPLANTATION OF A LAA OCCLUDER DEVICE WITH A LEADLESS PACEMAKER USING ICE GUIDANCE**

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Summary:

A novel case demonstrates the placement of a Watchman and Micra using intracardiac echocardiography (ICE) guidance.

History:

80yo M with permanent atrial fibrillation with slow ventricular response had a CHA2DS2-VASc score of 3 (age, hypertension) and a high bleeding risk (uncontrolled hypertension, age, antiplatelet medication, intracranial aneurysm, falls). He presented for consideration of an alternative to anticoagulation and treatment for symptomatic bradycardia. Implantation of a Watchman (Boston Scientific) left atrial appendage (LAA) occlusion device and a Micra leadless pacemaker (Medtronic) under ICE guidance was chosen as the most appropriate treatment approach.

Procedure:

Under general anesthesia, femoral venous access was obtained using micropuncture technique. The ICE catheter was advanced to the heart through a 9Fr sheath in the left femoral vein. Heparin was given to achieve an ACT >300 seconds, and transseptal puncture via the right femoral vein under ICE guidance.  The transseptal sheath was withdrawn, an ICE catheter was advanced across the transseptal puncture, and multiple images of the LAA were recorded. The transseptal sheath was exchanged for a Watchman anterior curve access sheath, which was advanced through transseptal puncture alongside the ICE catheter.  A 24mm Watchman FLX device was deployed in the LAA, assessed using ICE, and released. The delivery system was withdrawn to the right atrium and exchanged for the Micra 23Fr sheath over a stiff wire after serial dilation of the right femoral venous access site. The Micra delivery system was then advanced to the right ventricular septum and the pacing capsule was deployed. A tug test confirmed that 3 tines were engaged. Capture thresholds, sensing and impedance measurements were excellent. The tether was cut and slowly removed. ICE confirmed the stability of the MICRA device and the absence of a pericardial effusion. Sheaths were removed and both access sites were closed using figure-of-eight sutures. There were no complications.

Conclusion:

This novel technique using ICE during concomitant Watchman and Micra implantation allows one operator to perform both procedures in the same setting safely, reducing procedure time and sparing patients from undergoing multiple, separate procedures.

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