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X-ray Reduction LAAC Workflow by Simulating Four TEE Angles Guided by Ultrasound

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The drawbacks in the conventional catheter ablation in combination with left atrial appendage occlusion (one-stop surgery) are known as:

- Percutaneous left atrial appendage occlusion in "one-stop surgery" requires intraoperative transesophageal echocardiography (TEE) to evaluate the effect of the closure and stability. However, TEE is generally not recommended in China after atrial fibrillation catheter ablation to avoid the occurrence of atrioesophageal fistula (AEF).
- Under local anesthesia in "one-stop surgery", TEE can cause great pain to patients.
- During Percutaneous left atrial appendage occlusion surgery, repeated X-ray combined with TEE is required to jointly estimate the effectiveness and stability of the closure.

The high X-ray dose may result in health hazards for both patients and medical staff. Our team introduced intracardiac echocardiography (ICE) to replace the conventional TEE, which created Ultrasound guided ultra-low-radiofrequency ablation + Percutaneous left atrial appendage occlusion (XR-Star surgery). XR-Star implements ICE-guided catheter ablation for atrial septal puncture, catheter ablation and Percutaneous left atrial appendage occlusion. Through many clinical practices, we found XR-Star has conquered the drawbacks and benefits by:

- Obtaining clearer images with additional angle perspectives
- Avoids TEE induced complications
- Lower intraoperative X-ray
- Easy to operate

Without any doubts, the idea of improving the efficiency and minimizing the complications of traditional procedure is becoming more and more important for physicians all over the world.



Meet October's Feature Institution



The Second Hospital of He Bei Medical University was founded in 1920 and is a comprehensive Level III hospital. The Hospital provides a range of complex care across medical treatment, surgical, emergency, rehabilitation while also focusing on both medical education and scientific

research. As one of the largest medical centers in He Bei Province, a number of departments are recognized as national, key clinical departments, including the Cardiovascular, Cardiovascular Surgical, Neurology, Ophthalmology, Pulmonology, Emergency and Anesthesiology departments. Internal Medicine is also an advanced subject of the Department for Education of He Bei Province. The hospital currently has 2,816 beds. In 2017, the total number of emergency visits was 2.56 million; the annual discharge of patients was 160,000, and 70,000 procedures were completed. One academican of the Chinese Academy of Engineering is currently working in the Second Hospital of He Bei Medical University.