

# Comparison of conventional vs. fluoroless catheter ablation of supraventricular tachycardias

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**Introduction:** Supraventricular tachycardia (SVT) comprises a heterogeneous group of arrhythmias with an atrial and/or ventricular rate of more than 100 beats per minute at rest, which involve cardiac tissue at the level of the His bundle or above.<sup>1</sup> Radiofrequency (RF) catheter ablation of SVT is considered the gold standard, delivering excellent outcomes.<sup>2</sup> The traditional fluoroscopic approach is increasingly being replaced by electroanatomical mapping (EAM) systems and intracardiac echocardiography (ICE), which eliminate radiation exposure for both patients and medical staff.

**Patients and Methods:** Data on patients with supraventricular tachycardia (SVT), including AV node reentry tachycardia, atrioventricular reentry tachycardia, atrial flutter, and atrial tachycardia, were retrospectively collected from hospital records. The fluoroless (FL) group contains 203 patients who underwent ablation using EAM systems, while the control group included the last 140 patients who received conventional SVT ablation using fluoroscopy. Two EAM systems were utilized, with all procedures performed by three experienced operators.

**Results:** FL group had 50.7% of female patients with age of 51.1±16.5 while control group had 38.5% of female patients with age of 52.8±16.6 years. The duration of the procedure was comparable between the two groups, with times of 57.4 ± 26.5 minutes for the FL group and 66.5 ± 29.0 minutes for the control group. Acute success, defined as the non-inducibility of arrhythmia or, in the case of atrial flutter (AFL), the presence of cavotricuspid isthmus conduction block, was achieved in 97.5% of the FL group and 96.5% of the control group.

**Conclusion:** We have successfully implemented fluoroless technologies for SVT ablation, achieving excellent acute outcomes and a safety profile that matches one of conventional methods. By removing the risks associated with fluoroscopy, these technologies could be advantageous for both patients and physicians.

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## LITERATURE

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