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## Zero fluoroscopy catheter ablation: Single center experience

### Background:

Radiofrequency catheter ablation for cardiac arrhythmias has traditionally been guided by fluoroscopy. Exposure to fluoroscopy has no safe dose void of stochastic and deterministic biologic risks. Zero fluoroscopy (ZF) approach for electrophysiologic (EP) studies and catheter ablation is gaining interest as a means of eliminating the above risks. Here we share our single tertiary centre experience in ZF EP procedures.

### Methods:

A prospective non-randomized registry between January 2021 to December 2023 is being performed. Consecutive patients with supraventricular tachycardia, including AVNRT, AVRT Aflutter are being enrolled. Ensite Precision (Abbott), Carto (Biosense Webster) and Rhythmia (Boston Scientific) 3D electroanatomic mapping systems are being used. Cath lab staff members are void of wearing heavy lead protection during the procedure. Outcomes sought include acute procedure success, complications, procedure times and fluoro exposure. Since more operators utilized conventional fluoroscopy (CF) approach, the sample ratio of ZF to CF was about 1:3.

### Results:

Between February 2021 to November 2021, a total of 40 ZF cases are described. There were no significant differences in both acute procedural success and complication rates. Total procedural time was initially longer in the ZF series with the learning curve which attenuated following the first 5 to 7 cases. Number of lesion applications although not reaching statistical significance in this series were generally lower in the AVNRT cohort. Overall subjective assessment of the patient journey and cath lab team experience in the ZF series is a positive given being lead free for staff members and radiation exposure free for both patient and staff cohort.

### Conclusion:

Peri-procedural and post-procedural outcomes with a ZF approach compares favourably with traditional fluoroscopic navigation without increasing procedural times. With increasing data and evolving mapping technologies potentially offering lower cost, zero fluoro catheter procedures has the potential to become the default approach when starting an EP procedure.

### Biography:

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