Ablation Of Atrial Fibrillation Beyond Pulmonary Vein Isolation: Do Additional Ablation Lesions Impact Left Atrial Function?

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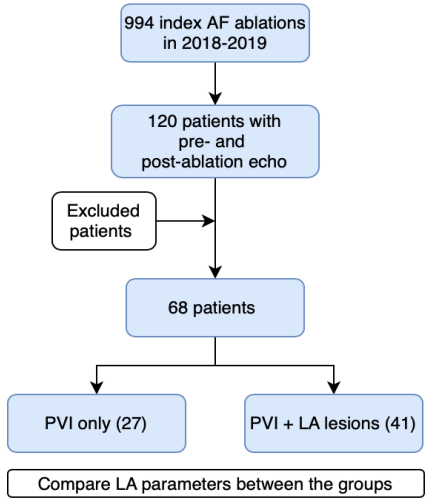
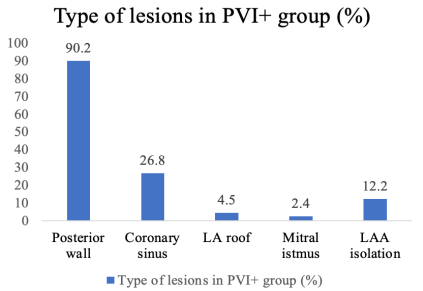
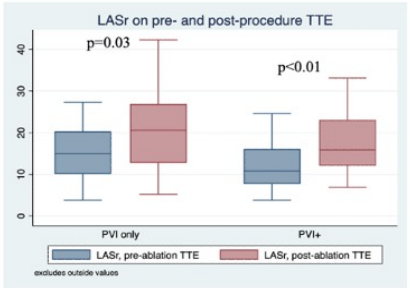
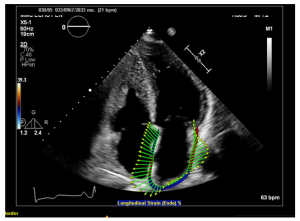
Background: Electrical isolation of pulmonary veins (PVI) is a cornerstone of Atrial Fibrillation (AF) ablation. The overall effect of AF ablation, and especially lesions beyond PVI, on left atrial (LA) function is currently poorly understood.

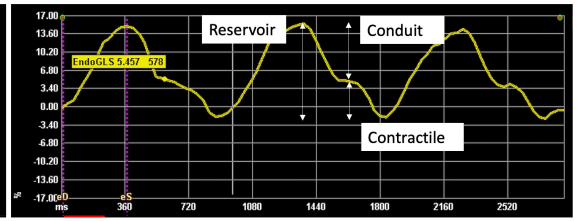
Aim: Our aim was to determine if LA function is different in patients after extensive LA ablation compared to PVI only. We performed non-inferiority analysis of LA strain after PVI with additional non-pulmonary vein ablation lesions in LA (PVI+) and PVI alone.











Results: The PVI only group had a higher proportion of patients with paroxysmal AF (70% vs 30%). The PVI + group was observed to have a slightly higher increase in LA reservoir strain (LASr) compared to PVI alone (5.0%vs 4.3%, $p<0.01$ for non-inferiority). LASr non-inferiority was confirmed when adjusted for age, sex, CAD, HLD, AF type, rhythm at pre-procedure TTE in a multivariable linear regression model, 90% CI (-5.46; 2.04), $p<0.01$.

Conclusion: LA functional improvement evaluated by LASr was non-inferior after PVI with additional LA ablation lesions compared to PVI alone, suggesting that more extensive ablation does not negatively affect LA function.

Abstract disclosure: Olga Reynbakh: none