Introduction: Transseptal puncture (TSP) can be challenging with life-threatening complications in atrial fibrillation radiofrequency ablation.

Methods: Transseptal left atrial catheterization was performed in 99 patients under right anterior oblique fluoroscopy guidance using tilt angle of atrium septum (TAAS) view. The TAAS was established between the perpendicular line to the atrial septum and the sagittal line of the body, and was measured and analysed on axial images in cardiac computed tomography angiography.

Result: The mean age of the study population was 62.5±9.4 years, with 68.7% men. Mean TAAS was 31.10±2.44° without a significant difference between men and women (31.07±2.40° vs 31.11±2.51°, p= 0.936). The left atrium was traversed in all patients without fatal or nonfatal complications.

Conclusion: The use of TAAS view in right anterior oblique fluoroscopy allowed effective TSP.