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LEFT ATRIAL APPENDAGE OUTFLOW VELOCITY PREDICTS SINUS RHYTHM STABILITY IN PATIENTS WITH PERSISTENT ATRIAL FIBRILLATION UNDERGOING TEE-GUIDED RHYTHM CONTROL INTERVENTION

ACC Poster Contributions
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Session Title: Echocardiography: 3-D, TEE, and Intracardiac Echo
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Background: Our aim was to define the predictive value of left atrial appendage (LAA) outflow velocity in patients with persistent atrial fibrillation (AF) with respect to sinus rhythm (SR) stability after its restoration.

Methods: We searched our echo laboratory database for pts. who underwent transesophageal echocardiography (TEE) with measurement of LAA flow prior to intervention, and who had at least one follow up.

Results: From the 416 pts. found, 165 (40%) had to be excluded from further analysis due to prohibitive TEE findings like LAA thrombi, failure of the index procedure, or lack of follow-up. In the remaining pts., age was 67±10 years, LA size 49±7 mm, ejection fraction (EF) 52±16%, and mean LAA flow velocity 30±16 cm/s. 191 pts. (76%) were males, and 144 (57%) had structural heart disease (SHD).

Drug treatment after restoration of sinus rhythm included a beta blocker in 122 pts. (49%) and specific antiarrhythmic drugs (class I or III) in 129 pts. (51%). At follow-up after 13±17 months, 143 pts. (57%) still had SR, and 108 (43%) were back in AF. In those 113 pts. who had a follow-up time of >12 months, 53 still had SR (47%).

LAA mean velocity correlated with the underlying cardiac condition (fig. 1). In pts. with a mean LAA velocity of <20 cm/s, the probability of SR after 12 months was 12% (10 out of 82), and only 3 pts. (4%) had SR in presence of LA dilatation >60 mm and LAA flow <20 cm/s.

Conclusions: LAA flow velocity carries important prognostic information with respect to long term maintenance of SR.