

## Left Atrial Contractile Function after the Maze Procedure and the Occurrence of Stroke

*Buber, Jonathan; Luria, David; Sternik, Leonid; Raanani, Ehud; Feinberg, Micha; Nof, Eyal; Gurevitz, Osnat; Eldar, Michael; Glikson, Michael; Kuperstein, Rafael*  
Sheba Medical Center, Tel Hashomer, Israel

**Objective:** In this study we aimed to evaluate the possible relation between left atrial (LA) size and contraction profile in patients following the maze procedure and the occurrence of strokes suspected to be of thromboembolic origin.

**Background:** LA function after the maze procedure has been shown to be reduced or absent in many instances. Whether the absence of LA contraction imposes a risk for stroke, even in the presence of sinus rhythm and after the removal of the LA appendage, is not known.

**Methods:** Baseline clinical, surgery related and post-surgery echocardiographic data for 150 patients who underwent the maze procedure between 2004 and 2009 and maintained sinus rhythm was prospectively collected and retrospectively analyzed. LA volume and function were evaluated. The occurrence of stroke was evaluated by contacting all patients by telephone and reviewing all their clinical records.

**Results:** At a mean follow up time of 24.5 months, 47 patients (31%) had no evidence of LA mechanical contraction. Of the 15 patients (10%) who had a stroke, 10 patients lacked LA contraction, and all strokes had been thromboembolic. Multivariate analysis showed that lack of LA contraction posed a >5.5 –fold increase, and LA volume >95 ml a >3.5-fold increase in the risk for stroke ( $p=0.004$  and  $0.03$ , respectively). Patients lacking LA contraction were at the greatest risk if their LA volume was >95 ml (a 13-fold increase in risk,  $p=0.03$ ).

**Conclusions:** For patients who underwent the maze procedure and maintained sinus rhythm, the lack of LA contraction and a LA volume > 95 ml pose a significant increase in the risk for thromboembolic stroke. These patients should be considered for continued anticoagulant therapy if not contraindicated.

