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## Outcomes of right atrial electromaze ablation of supraventricular tachydysrhythmias in patients with non-neonatal Ebstein's anomaly

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**Background:** Favorable outcomes in EA reparative procedures are predicated on tricuspid valve competence, right ventricular function and presence of arrhythmia. We report our experience with right atrial electromaze for supraventricular tachydysrhythmias in patients with non-neonatal Ebstein's Anomaly (EA)

**Objectives:** Assessment of clinical outcomes of right atrial electromaze for supraventricular tachydysrhythmias in patients with non-neonatal Ebstein's Anomaly (EA).

**Method:** Between January 2002 and December 2013, retrospective review of 37 patients had operations for refractory atrial dysrhythmias, 6-step right atrial electromaze with concomitant anatomy-specific repair, as a part of this three-step surgical protocol for Ebstein's anomaly was done. A 6th step had been added to previously described 5-step right atrial electromaze. Mechanisms of arrhythmia included atrial re-entry (n=16), atrial fibrillation (n=15), automatic atrial (n=3), accessory connections (n=6) and atrio-ventricular nodal reentry (n=2). Mean age at operation was 17.3 (9.1-56.2) years. Postoperatively all patients were followed up regularly for mean period 5.3 (1-12) years by clinical examination, electrocardiography and echocardiography.

**Results:** The in-hospital mortality was one patient (2.7%) with no late deaths. Doppler echocardiographic examination revealed significant improvement of valve regurgitation ($p<0.0001$). New York Heart Association (NYHA) functional class was class I in 77.8% of the survivors and II in 22.2%. Mild Tricuspid Regurgitation (TR) (grade-1) was found in 72.2% and required no treatment and moderate TR (grade-2) in 25% which necessitated continuous anti-failure medical treatment. The cardiothoracic ratio decreased significantly ($p<0.05$). No deleterious effects of the Bidirectional Cavopulmonary Anastomosis (BDCPA) have been reported. Sinus rhythm has remained stable over the follow-up period in 31 patients (86.1%).

**Conclusion:** Successful surgical therapy of arrhythmias can be performed safely at the time of repair of non-neonatal EA. Early consideration for single-stage therapy of arrhythmia and structural heart disease is indicated whether symptomatic or asymptomatic and cyanotic or acyanotic.

### Biography

Ezzeldin A Mostafa is an Emeritus Professor and Past HOD of Cardiovascular and Thoracic Surgery, Ain-Shams University Hospital, Faculty of Medicine, Cairo, Egypt. He is the Ex-Managing Director of Cardiac Surgery Academy, Ain-Shams University, Cairo, Egypt. He has Bachelor's degree from Faculty of Medicine, Ain-Shams University (1976), MSc in General Surgery and then in Cardiology and Vascular Diseases (MCVD), and then his PhD (MD) in Thoracic and cardiovascular surgery (1984) and lastly MBA from ESLSCA (2010). He is a Member of the Society of Thoracic Surgery; the European Association of Cardio-Thoracic Surgery; the World Society of Pediatric Cardiology and Cardiac Surgery and the Egyptian Society of Cardio-Thoracic Surgery (ESCTS), etc. His major interests are neonatal and pediatric cardiac surgery, mitral and aortic valve repair, Ebstein's repair, dysrhythmia and maze surgery and health management by information system.

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