


Left atrial stiffness index correlates with atrial fibrillation recurrence in patients who underwent electrical cardioversion

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Introduction: Left atrial (LA) remodeling is a complex anatomical and functional process in response to electrical, mechanical and metabolic disturbances. LA remodeling is usually a consequence of LA volume overload, left ventricular systolic dysfunction and physiological aging process. LA remodeling directly correlates with atrial fibrillation occurrence.¹⁻³ *Aim:* To analyze left atrial strain parameters for the purpose of prediction of atrial fibrillation (AF) after the electrical cardioversion.

Patients and Methods: Analysis included 31 patients, who underwent electrical cardioversion due to AF at the Department of Cardiology, General Hospital "Prim. Dr. Abdulah Nakaš" in the period from May 2023 until May 2024. Transthoracic and transesophageal echocardiogram was performed in all patients, regardless of the previous anticoagulation therapy.

Results: There was a statistically significant correlation between the recurrence of AF three months and six months after the electrical cardioversion and the following echocardiographic parameters: LA reservoir strain ($p<0.001$; $p=0.001$), LA conduit strain ($p<0.001$, $p=0.001$), LA contractile strain ($p<0.001$; $p<0.001$), E/e' ratio ($p<0.001$, $p=0.001$), and left atrial stiffness index ($p<0.001$; $p=0.004$). Left atrial volume index did not significantly correlate with AF recurrence within three and six months after the cardioversion.

Conclusion: Patient risk stratification for AF recurrence could be made based on LA strain parameters.

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LITERATURE

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