**ASSESSMENT OF RIGHT ATRIAL FUNCTION COMPARED TO INTERATRIAL SEPTUM AND LEFT ATRIUM: A DOPPLER MYOCARDIAL IMAGING STUDY IN HEALTHY SUBJECTS**

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Background: Recently, assessment of the atrial motion and deformation indices obtained via Doppler myocardial imaging (DMI) has been proposed as a new method of exploring the atrial function. Our aim was to assess the right atrial (RA) regional function using myocardial velocities, strain, and strain rate imaging (SRI) and compare it with the function of the interatrial septum (IAS) and left atrial (LA) lateral wall in healthy young adults.

Methods: A total of 75 healthy young individuals (mean age= 29 -/+ 14 years; 35 women and 40 men) underwent standard transthoracic echocardiography and DMI at rest. Myocardial velocities, strain, and SRI profiles from the RA free wall, IAS, and LA lateral wall were calculated throughout the three cardiac cycles.

Results: The RA peak systolic, peak early, and late diastolic velocities were 9.2±1.6 cm/s, -9.5±1.8 cm/s, and -8.3±2.1 cm/s, respectively. The RA peak systolic strain was 152% ±51%. The RA systolic strain was significantly higher than that of the IAS (152% ±51% vs. 87%± 21%, p=0.001) and the LA lateral wall (152% ±51% vs. 89%±15%, p=0.001). The RA peak systolic, peak early, and systolic SR were 6.3±3.0 s-1, -5.4±1.7 s-1, and -4.5±2.2 s-1, respectively.

Conclusion: DMI proved to be a feasible and reproducible method for the assessment of the RA function in healthy young subjects. RA free wall myocardial motion and deformation were significantly higher than those of the IAS and the LA lateral wall, but the rate of the RA free wall deformation was not significantly different.