

ECHOCARDIOGRAPHIC PARAMETERS ASSOCIATED WITH LEFT ATRIAL APPENDAGE THROMBUS IN PATIENTS WITH NON-VALVULAR ATRIAL FIBRILLATION

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Introduction. Atrial fibrillation (AF) is the most common sustained cardiac arrhythmia in adults, with thromboembolic complications as the main reason for morbidity and mortality. Left atrial appendage thrombosis (LAAT) is present in up to 2.7% of patients with AF despite guideline-directed anticoagulation and 23% of patients with inadequate anticoagulation [1]. The CHA2DS2-VASc score is an established clinical tool which is recommended for determining the thromboembolic risk in AF patients [2]. However, thrombus formation is a complex process, and the mere assessment of a thrombus mass formation based only on this score could be insufficient. While echocardiography remains a useful and relatively simple tool to assess heart structure and function in patients with AF.

Aim of the study. To identify echocardiographic parameters associated with LAAT in patients with non-valvular AF.

Materials and methods. The retrospective study included 100 patients with persistent non-valvular AF who were admitted to the Grodno State Cardiological Center for direct electrical cardioversion. All patients underwent clinical, laboratory, and instrumental studies, including transthoracic echocardiography (TTE) and transesophageal echocardiography (TEE). According to TEE results, patients were divided into 2 groups: «LAAT» (n=30) and «Non LAAT» (n=70). All patients had a sufficient period (more than 3 weeks) of direct oral anticoagulation prior to hospital admission. Statistical analysis was performed using the STATISTICA 12.0 software.

Results and discussion. Patients in both groups were comparable in age (63.6 [58; 69] vs 61.3 [54; 68], $p=0.166$) and gender (male sex 66.7% vs 60%, $p=0.591$).

There were no significant intergroup differences in the prevalence of hypertension, coronary artery disease, obesity, hyperlipidemia, prior stroke, and diabetes mellitus ($p>0.05$). However, patients with LAAT had a higher prevalence of prior MI (10% vs 2.8%, $p=0.01$), renal impairment (mean eGFR 71.2 [54; 84] vs 90.0 [64; 103], $p=0.015$), and heart failure with reduced EF (40% vs 7.2%, $p<0.001$).

According to the results of TTE, patients didn't have significant differences in left atrial diameter (46.8 [43; 50] mm vs 44.2 [41; 46] mm, $p=0.06$) and left atrial volume (74.6 [61; 85] mm³ vs 63.8 [52; 72] mm³, $p=0.056$). However, the left atrial volume index (LAVI) was higher in patients with LAAT (37.6 [31; 42] mm³ vs 30 [24; 36] mm³, $p=0.007$). Moreover patients with LAAT had lower left ventricular ejection fraction (LVEF) (49.2 [44; 60]% vs 57.4 [55; 62]%, $p=0.019$) and higher right atrial area (26.7 [23; 30] mm² vs 23.8 [21; 27] mm², $p=0.02$).

It is interesting to say that patients didn't have differences in values of end-diastolic volume of the left ventricle (54.8 [51; 58] mm vs 52 [48; 56] mm, $p=0.22$), but patients in the LAAT group had significantly higher end-systolic volume of the left ventricle (41.6 [33; 45] mm vs 36.1 [32; 40] mm, $p=0.03$) and left ventricular mass index (147.4 [119; 164] g/m² vs 121.3 [99; 136] g/m², $p=0.003$).

Conclusion. Patients with LAAT had higher values of left atrial and right atrial diameters and indices, as well as lower LVEF. Further use of those parameters could help predict LAAT development in patients with non-valvular AF.

ЛИТЕРАТУРА

1. Identifying Patients at High Risk of Left Atrial Appendage Thrombus Before Cardioversion: The CLOTS-AF Score / L. Segan [et al.] // J Am Heart Assoc. – 2023. – Vol.12, №12. – P. e029259. doi: 10.1161/JAHA.122.029259.
2. CHA₂DS₂-VASc score stratifies mortality risk in patients with and without atrial fibrillation / C.S. Harb [et al.] // Open Heart. – 2021. – Vol. 8, №2. – P. e001794. doi: 10.1136/openhrt-2021-001794.

CEREBRAL TOXOPLASMOSIS IN PRIMARY DIAGNOSED HIV-INFECTION (CLINICAL CASE)

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Introduction. *Toxoplasma gondii* belongs to the phylum Apicomplexa, which is a diverse group of protists. They are mostly intracellular parasites and may cause potentially serious disease in animals and humans. Almost 25% of the patients with