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strain and ERI was associated with a two-fold AF risk increase (HR = 2.0; 95% CI 1.3-3.1) in fully adjusted models.

Conclusions: Workers exposed to job strain or effort-reward imbalance at work, separately and in combination, were at increased AF risk. Prevention strategies targeting psychosocial stressors at work should be considered to decrease the burden associated with AF.

THE INFLUENCE OF HYPERTENSION ON HEART FAILURE'S PHENOTYPES IN PATIENTS WITH HEART FAILURE AND ATRIAL FIBRILLATION, IN COMPARISON TO PATIENTS WITH HEART FAILURE AND SINUS RHYTHM

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Objective: Atrial fibrillation is being characterised as both an etiological factor and a consequence for developing heart failure, while it does the same for the latter.
Our aim was to identify whether and in which way, the presence of hypertension influences the development of the three phenotypes of heart failure in patients with heart failure and atrial fibrillation, as well as in patients with heart failure alone.

Design and method: We analysed 194 patients: 97 with heart failure and atrial fibrillation (group A) and 97 patients with heart failure in sinus rhythm (group B), randomly selected from 2019 to 2021. The phenotypes of heart failure were selected according to 2021 European Society of Cardiology Guidelines: patients with heart failure with reduced ejection fraction (1), with mildly reduced ejection fraction (2) and with preserved ejection fraction (3).

Results: In patients belonging to A1 group (n = 44) the result was that hypertension has not played a significant role in developing this phenotype (p = 0.1347), in comparison to patients in B1 group (n = 30), where the association between hypertension and heart failure with reduced ejection fraction was statistically significant (p = 0.0263). What is more, patients in A2 group (n = 14), as well as those in B2 group (n = 24), were not associated with the presence of hypertension (p = 0.4686, respectively p = 0.5638). As well as the latter, hypertension did not influence the development of heart failure with preserved ejection fraction in both groups.

Conclusions: Taking into consideration that hypertension illustrates a common aetiology for both pathologies mentioned above, we discovered that hypertension's presence influenced more the heart failure in sinus rhythm group, concluding that atrial fibrillation associated with heart failure did not pose an additive risk factor for hypertension developing. In addition, regarding the phenotypes, it was heart failure with a reduced ejection fraction that was influenced by hypertension. Further researches will improve the comprehensive relationship between hypertension, atrial fibrillation and heart failure, leading towards better management strategies.

ARTERIAL HYPERTENSION AS A PREDICTOR OF THROMBOEMBOLIC EVENTS IN PATIENTS WITH ATRIAL FIBRILLATION TREATED WITH DIRECT ORAL ANTICOAGULANTS

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Objective: The aim of the study was to assess predictors of thromboembolic events in patients with atrial fibrillation treated with direct oral anticoagulants (DOAC).

Design and method: From our single-centre prospective registry we enrolled 2792 consecutive atrial fibrillation patients that were started on dabigatran, rivaroxaban or apixaban. The mean duration of treatment exposure was 724 days. The primary outcome was the incidence of thromboembolic events. The incidence of bleeding events and death were also assessed. Potential risk factors for thromboembolic events were evaluated using Cox regression analysis.

Results: During the follow-up, 94 patients experienced a thromboembolic event (1.9%/year). Twelve patients experienced two and one patient experienced three thromboembolic events. Considering only the first thromboembolic event, 39 patients experienced a stroke, 14 patients a transient ischaemic attack (TIA), 12 patients a systemic thromboembolism (SE), 19 patients myocardial infarction (MI) and 10 patients a venous thromboembolic event. Twelve thromboembolic events were fatal (0.2%/year). According to a multivariate Cox regression analysis (Table 1), significant predictors for a composite endpoint of stroke, TIA, SE and MI were age group (HR 1.27, 95% CI 1.04–1.56, p = 0.022), arterial hypertension (HR 2.86, 95% CI 1.15–7.12, p = 0.024) and history of stroke, TIA or SE (HR 2.6, 95% CI 1.66–4.05, p < 0.001). The incidence of major bleeding was 2.3%/year.

Table 1. Risk factors associated with thromboembolic events (stroke, transient ischaemic attack, systemic thromboembolism or myocardial infarction): multivariate Cox regression analysis.

Risk factor	Hazard ratio	95 % confidence interval	*p*
Age group*	1.27	1.04–1.56	0.022**
Male sex	1.07	0.68–1.66	0.780
Arterial hypertension	2.86	1.15–7.12	0.024**
Diabetes mellitus	1.43	0.87–2.35	0.160
Heart failure	1.12	0.64–1.95	0.700
Ischaemic heart disease	0.92	0.46–1.84	0.802
Concomitant antiplatelet therapy	0.84	0.25–2.83	0.777
Prior stroke, TIA or SE	2.60	1.66–4.05	<0.001**
History of bleeding	1.33	0.53–3.29	0.545
Anemia	0.88	0.45–1.72	0.700

*Patients were classified into four groups according to their age: <75, 75–79, 80–84 and ≥85 years old.
** p<0.05
TIA: transient ischaemic attack, SE: systemic embolism.

Conclusions: In this prospective clinical study we have shown that age, arterial hypertension and history of stroke, TIA or SE were strong predictors of arterial thromboembolic events in patients with atrial fibrillation treated with DOAC. Among those, arterial hypertension had the highest hazard ratio. Since arterial hypertension presents a potentially modifiable predictor, it can be assumed that its treatment was not adequate.

ASSOCIATION OF G894T NOS3 GENE POLYMORPHISM WITH ATRIAL FIBRILLATION IN PATIENTS WITH ARTERIAL HYPERTENSION IN UZBEK POPULATION

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Objective: To estimate influence of G894T polymorphism of NOS3 gene on risk of developing AF with AH in Uzbekistan.

Design and method: Study included 206 patients with AH I–III degree (JSC/JSC, 2018) of both sexes.Mean age of patients was 58.82 ± 11.91 years, the mean duration of hypertension was 10.9 ± 7.2 years. To verify AF , ECG Holter monitoring was performed using a Cardiospy monitor. Genotyping of G894T polymorphism of the NOS3 gene was performed using real-time PCR using gene-specific primers of allele-specific probes, followed by fluorescence detection of corresponding alleles.Results of all studies were considered statistically significant at p<0.05

Results: Relationship between G894T polymorphism of NOS3 gene and risk of developing AF, patients were divided into two groups: cases, n = 91 - with AF and controls, n = 115 - without AF. Among cases, following distribution of genotypes and alleles of G894T polymorphism of the NOS3 gene was revealed: GG genotype - determined in 52.7%, GT genotype - in 45.1%, TT genotype - 2.2%, p = 0.000. Allelic distribution showed predominance of carriage of the G allele: G allele - 75.3%, T allele - 24.7%, p = 0.000. Among controls, allelic distribution was with significant prevalence of the G allele: G allele in 75.7%, T allele in 24.3%, respectively, Xi = 119.035, p = 0. 000.Ratio of GG:GT:TT - genotypes was as follows: 60.0%: 31.3%: 8.7%, Xi = 68.426, p = 0.000.
An analysis revealed protective effect of G allele G894T gene polymorphism on risk of developing AF with AH. Based on general model of inheritance, protective effect of GG genotype on risk of developing AF in hypertensive patients was found: general model of inheritance demonstrated significant accumulation of GG genotype among controls 60.0% (Xi2 = 6.72 P = 0.03; OR = 0.74, 95% CI 0.43-1.30), while GT genotype was less common in 31.3% and the TT genotype is

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