Results: It has been established the same direction of anticoagulative activity changes under the influence of both drugs. We set the reliable increase of protein C activity (ramipril group – from 0.82 ± 0.25 u. to 1.09 ± 0.14 u. $P < 0.001$ and losartan group – 0.86 ± 0.22 u. to 1.12 ± 0.37 u. $P < 0.001$), but the changes of AT III and factor XIII were unreliable. As to state of fibrinolisys, we have found the incrimination of the activity after this period of treatment. Administration of ramipril forwards more considerable raise of PFA, the absolute advantage ramipril against losartan was set at CAR = 16.4%, OR = 1.92 (0.74–9.84).

Conclusions: Both drugs (ramipril and losartan) have a certain equal level of the influence on coagulation; however ramipril have been shown greater ability on the changes of fibrinolitic activity.

PO113 | Is There an Association of Diffuse Large B-cell Lymphoma with Coronary Artery Disease?

H. Holik[1,2]; B. Coha[1]

[1]*General Hospital dr. Josip Benčević, Slavonski Brod, Croatia;*

[2]*University of Osijek Josip Juraj Strossmayer, Osijek, Croatia*

Background: The association of malignancies with venous thromboembolism is known but the association with arterial thromboembolism is not so clear. There is also insufficient data on the association of certain lymphoma entities with coronary artery disease (CAD).

Aims: To determine the prevalence of CAD in different types of lymphoma.

Methods: We collected data retrospectively from patients with Hodgkin's and non-Hodgkin's lymphoma at the General Hospital Dr. Josip Benčević from the beginning of 2011. by August 2020.

Results: 121 patients were included in this study, 67 (55%) female. 11 (9%) patients had CAD, 8 male and 3 female. Out of a 121 patients with lymphoma, 51 (42%) had diffuse large B-cell lymphoma (DLBCL), 13 (11%) had follicular lymphoma (FL), other indolent lymphomas had 20 (17%), 13 (11%) had Hodgkin's lymphoma, T lymphomas 6 (5%) and 18 (15%) patients had other types of lymphoma. The time from the first manifestation of CAD to the diagnosis of lymphoma ranged from 3 months to 20 years. Of the 11 patients with CAD, 7 (64%) had DLBCL, 2 (18%) small cell lymphoma, 1 (9%) hairy cell leukemia, and 1 (9%) FL. No one had CAD after lymphoma diagnosis.

Conclusions: This study suggests a higher presence of CAD in patients with DLBCL than in other types of lymphoma. The prevalence of CAD in DLBCL is almost twice as high as in the general population (6.7% for the general population older than 20 years) while for other types of lymphoma it is similar to prevalence in the general population. Interestingly in our study was higher prevalence of female with lymphoma while CAD was almost 3 times more common in male. Further studies with more patients are needed to confirm this observations and eventually to find a link between DLBCL and CAD.

PO114 | Endothelin and General Oxidative Ability as Markers of Deadaptation in Sailors in the conditions of the Arctic Flight

N. Vorobyeva[1,2]; A. Vorobyeva[2]

[1]*National Medical Research Center for Hematology (Northern Branch) Ministry of Health of Russia, Arckhangelsk, Russian Federation;*

[2]*Northern State Medical University Ministry of Health of Russia, Arckhangelsk, Russian Federation*

Background: One of the areas of clinical medicine is the study of the mechanisms of adaptation of the vascular endothelium as a risk factor for thrombosis.

Aims: The study aimed to determine the possible relationship between the development of endothelial dysfunction and the antioxidant system with modifiable risk factors in a trans-latitudinal flight in the Arctic.

Methods: The prospective study included 32 crewmembers of the research vessel «Mikhail Somov» during the «TransArctic-2019» integrated marine scientific expedition. Venous blood sampling was carried out before the went on a voyage (zero point) to the city of Arkhangelsk (64°33′ north latitude 40°32′ east longitude) and at the highest point of the expedition - Hayes Island (80°34′ north latitude 57°41′ east longitude). The determination of the concentration of endothelin-1 and the total antioxidant ability of serum (AOS) by enzyme-linked immunosorbent assay. The study was supported by a grant from the Russian Foundation for Basic Research - project No. 18-00-00814-COMFI (18-00-00478).

Results: Statistically differences were obtained in the concentration of endothelin at zero ($M = 4.79 \pm 2.1$) pg/ml and high points ($M = 7.02 \pm 2.42$) pg/ml, $t = -3.6532$, df = 31, $P < 0.001$, the concentration of endothelin-1 significantly increases, which indicates the first signs of the formation of maladaptation of the vascular endothelium in the form of vasoconstriction. 84.4% of crewmembers at a high point showed a high overall antioxidant ability, which may indicate compensation for antioxidant defence mechanisms. It was shown that AEC in the study group among smokers was statistically significantly higher than in non-smokers.

Conclusions: Moreover, the predominance of high AOC among the crew of the vessel indicates an increased oxidative load on the human body to neutralize the excess amount of reactive oxygen species.

PO115 | Seasonal Changes of Platelet Aggregation Indexes at the Patients with Stable Angina

D. Shorikova; E. Shorikov; P. Shorikov

Bukovinian State Medical University, Chernivtsi, Ukraine

Background: Seasonal variations of cardiovascular complications is signed by different authors (Turin T. C. et al., 2008; Khan F. A. et al., 2005). The activation of clotting is rapid protective reaction to vessel damage. At the same time, the studies which present correlations

of platelets aggregation with seasonality, and, also, describe clinical risk of vascular complications are limited.

Aims: To analyze the seasonal changes of platelet aggregation indexes, and, also, risk of thrombotic complications at patients with stable angina in emergency care clinic.

Methods: The study included 939 people (male - 507, female - 432, average age - 42.1 ± 8.9 years). The analysis of platelet aggregation was carried out on the analyzer of platelet aggregation "BIOLA" 230LA by J. Born method.

Results: It is set that the highest risk of thrombotic complications has been on February and March, where contribution of patients with thromboembolism are 20.9% ($P = 0.001$). Probability of thromboembolism in the 1st quarter of the year among surgical patients in the postoperative period is set as 29.9% ($P < 0.005$). At the patients with thrombotic complications are estimated the higher level of spontaneous ($P < 0.05$), ADP-induced aggregation ($P < 0.05$), and the speed of induced aggregation in compare with healthy volunteers ($P < 0.05$). Due to seasonal changes the 63.0% patients have higher level of ADP-induced aggregation than grouping median in the 1-st quarter of year, and the lowest risk due to the aggregation parameters are set at the 4th quarter.

Conclusions: In patients with stable angina were proved seasonal variations of thrombotic complications: the highest risk of thrombosis occurs in February and March due to increased level of spontaneous and ADP-induced platelet aggregation.

PO118 | Homocysteine Exchange in Athletes in the Arctic Region

N. Vorobyeva[1,2]; N. Malyshkina[2]

[1]*"National Medical Research Center for Hematology" (Northern branch) Ministry of Health of Russia, Arckhangelsk, Russian Federation;*

[2]*Northern State Medical University Ministry of Health of Russia, Arckhangelsk, Russian Federation*

Background: The impact of lifestyle on blood homocysteine levels is undeniable. The role of hyperhomocysteinemia in the development of vascular pathology is also well known. The climatic and geographical features of human life in the Arctic region also leave their mark.

Aims: Determination of changes in blood homocysteine levels in athletes living in the Arctic region of the Russian.

Methods: The study included a survey of 98 athletes involved in various sports living in the Arctic region of the RF. The median age was 19.5 (16; 25) years. Determination of blood serum homocysteine level was done by enzyme immunoassay. Polymorphisms of three folate cycle genes were studied: MTHFR 677C>T polymorphism, MTHFR polymorphism (glu429ala); MTRR A66G polymorphism.

Results: Homocysteine levels were from 3.33 to 50.0 (Me = 15.84) μmol/L. A weak correlation was found between the level of homocysteine and the gender of the athlete ($r = 0.037$, $P = 0.774$), the age of the athlete ($r = 0.222$, $P = 0.081$), the level of sportsmanship ($r = 0.079$, $P = 0.540$). The polymorphism MTHFR 677 C>T was found in 45% of cases (CI: 34-57%), homozygotes - 5% (CI: 1.5-12%) of alleles and heterozygotes - 40% (CI: 30-52%). MTHFR (glu429ala) polymorphism was found in 48% (CI: 36-59%), the homozygous allele A1298C was in 3.6% (CI: 0.8-10.3%). Heterozygotes - in 44% of cases (CI: 33-55%). The genetic marker MTRR A66G had a frequency of 76% (CI: 65-84%); homozygous variant in 23% (CI: 15-34%), heterozygous in 52% (CI: 41-64%).

Conclusions: Demonstrated a mild to moderate degree of hyperhomocysteinemia. There were no differences in the level of homocysteine depending on the allelic variants of the folate cycle enzyme genes ($P = 0.395$, $P = 0.987$, $P = 0.852$). Differences in blood homocysteine concentration in athletes with different alleles of the same gene of the folate cycle are insignificant. Which may indicate the influence of external factors on the high level of homocysteine in the blood.

CEREBROVASCULAR DISORDERS

LPB0002 | Safety and Pharmacokinetics of Direct Oral Anticoagulants after Bariatric Surgery: A Systematic Review

R. Leong[1]; D.K Chu[2,3]; M.A Crowther[2]; S. Mithoowani[2]

[1]*McMaster University, Faculty of Health Sciences, Hamilton, Canada;*

[2]*McMaster University, Department of Medicine, Hamilton, Canada;*

[3]*McMaster University, Department of Health Research Methods, Evidence and Impact, Hamilton, Canada*

Background: Bariatric surgery likely impairs the absorption of direct oral anticoagulants (DOACs). The optimal DOAC after bariatric surgery is unclear.

Aims: To report on the safety and pharmacokinetics of DOACs after bariatric surgery in adults.

Methods: We systematically searched MEDLINE, EMBASE, Cochrane Library, CINAHL and ClinicalTrials.gov from Jan 2000-Jul 2020 for randomized and non-randomized studies. Two reviewers independently screened titles, abstracts and full-text articles. We used the Newcastle-Ottawa scale to assess risk of bias in non-randomized studies excluding case reports. This review was registered with PROSPERO (CRD42020202636).

Results: We screened 2,086 titles and abstracts and included 19 records ($n = 2,233$ patients): no randomized trials, seven cohort studies, two case series, and ten case reports. Patients were taking DOACs for a variety of indications. Most studies had a moderate-high risk of bias. Of 2,123 patients taking apixaban, two (0.1%) developed venous thromboembolism (VTE) and six (0.3%) had major bleeding. Peak apixaban levels were measured in 13 patients (mean 182 ng/mL, 95% confidence interval [CI] 142-223 ng/mL); none were outside the therapeutic range seen in phase II studies. Of 94 patients taking rivaroxaban, two developed VTE (2.1%) and five (5.3%) had major bleeding. Peak rivaroxaban levels were measured in 17 patients (mean 249 ng/mL, 95% CI 162-336 ng/mL); eight (47%) were below and one (5.9%) was above the