

there were no reliable changes in the content of CK. Under the influence of resveratrol, there was a decrease in CEM CD32⁺CD40⁺ in both group 1 ($p = 0.038$) and group 2 ($p = 0.035$), indicating an improvement in the function of the endothelium. In the comparison group, this indicator did not change ($p = 0.547$). In patients of all groups, a reliable decrease in the content of FG in blood plasma was detected ($p < 0.01$). Expression of mRNA I κ B decreased in group 2 ($0.0101 + 0.0062$ vs. $0.0207 + 0.0153$, $p = 0.031$), which was calculated by the method $2^{-\Delta\Delta Ct} - 2.006 + 0.53$, and did not significantly change in group 1 ($p = 0.884$) and in the comparison group ($p = 0.570$).

Conclusion. Thus, in patients with coronary heart disease and AIT, elevated levels of CSI and inflammatory activation of the endothelium were determined. While comorbidity determined a more significant degree of impairment. Use of resveratrol polyphenol contributed to the decrease in the levels of proinflammatory cytokines, the content of acute phase reactant of inflammation of FG in the blood, and provided an endothelioprotective effect. In comorbidity of CHD and AIT, resveratrol, along with the above-mentioned effects, caused a decrease in NF- κ B-mediated signaling, which plays a leading role in the expression of inflammation genes.

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OXIDATIVE STRESS IN PATIENTS WITH CHRONIC VIRAL HEPATITIS C WITH DUODENAL ZONE ALTERATION OF HELICOBACTER PYLORI ETIOLOGY

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H. pylori infection is a major global health issue. World Health Organization has recognized *H. pylori* as a carcinogenic factor number one, contributing to gastric cancer since 1994 [1,2]. Furthermore, numerous lines of evidence indicate an association between *HP* and liver disease [3], particularly chronic hepatitis of HCV etiology (CHC) [4]. Although an association between *infections* has been reported, it remains controversial. Several studies have shown a strong correlation between *HP* infection and chronic viral hepatitis as well as HCV-related disease [5]. Aim of the study: Oxidative stress evaluation in gastric mucous membrane in patients with chronic viral hepatitis HCV in association with *Helicobacter Pylori* positivity, in dependence on the bacterial infectivity.

Material and methods. 69 patients with chronic viral hepatitis C were included into the study. 39 were men and 30 - women, medium age $40,7 \pm 1,4$. The diagnosis of chronic viral hepatitis C was established on the basis of clinical and laboratory liver pathology main syndromes and instrumental studies. Presence of HCV infection was determined in all patients, as well as ultrasound examination of the abdominal cavity, in some patients a liver biopsy was performed in case of necessity. Gastric mucous evaluation has been conducted by fibrogastroduodenoscopy with *Helicobacter Pylori* presence detection and assessment of *HP* infectivity degree. Oxidative stress estimation has been held by investigation of Malonic Dialdehyde (MDA by Chevary method), Superoxide dismutase (SOD – by Freid method) and Katalaze enzyme's blood levels (Kat - method by Dubinin) with concomitant appreciation of SOD concentration in gastric mucous (by Freid method). *HP* determination in biopsy specimen of gastric mucous has been performed by microscopic and urease methods. Microscopic method revealed the degree of gastric mucous bacterial infection. The number of bacteria in specimen up to 20 per the field of view was estimated as minimum degree (+), 21-50 bacteria - as medium (++) and more than 50 bacteria - as maximum (+++). The control group consisted of 30 healthy persons without pathology of the liver and cardiovascular system, diabetes mellitus and obesity. All patients were divided into 2 groups in dependence on the degree of bacterial infection in the gastric mucosa.

Results. The 1st group with minimum degree of bacterial infection in gastric mucosa represented 32%(23), the 2nd group with maximum degree of infection - 68%(46). Duodenogastric reflux was identified in 1st group in 27%(7) and in the 2nd - in 63%(12). The surface gastric epithelial damage of duodenum was found in 1st group in 28%(5), while in the 2nd group in 72%(13). Erosive duodenitis (ED) was detected in 46%(22), and has been found in the 1st group in -24%(8), while in the 2nd group,- in 75%(24). The ulcerative defect of mucous barrier was diagnosed in 19%(13) in general, with the greatest frequency in the 2nd group - 87%(11) despite the lack of complaints.

The Kat concentration level in gastric mucosa in the 1st group was higher $17,93 \pm 0,93$ (mm/min 1gr. tissue) than in normal ($p=0,001$), and has been detected even more significant in the 2nd group - $28,25 \pm 0,64$ (mm/min 1gr. tissue), in comparison with other groups, $p=0,001$. SOD levels in gastric mucous in both groups were significantly higher, compared to control group - $3,01 \pm 0,22$ A./1 gr. tissue. min ($p=0,001$) and $2,25 \pm 0,08$ A./1 gr. tissue. min ($p=0,001$), for 1st and 2nd groups, accordingly, as well as comparison between groups ($p=0,001$).

Conclusions.

1. High degree of *Helicobacter pylori* bacterial infection of gastric mucous has been identified in majority of patients with chronic viral HCV (68%).
2. The duodenal zone alteration such as erosive type and ulcerative defects were found in the group with maximum degree of bacterial *Helicobacter pylori* contamination (85%).
3. Alteration of antioxidant system was more pronounced in patients with chronic viral HCV hepatitis with maximum degree of gastric mucosal *Helicobacter pylori* infection as in blood serum as in mucous per se.

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ASSOCIATION OF GENE POLYMORPHISMS WITH RISK OF SPORADIC PAPILLARY THYROID CARCINOMA

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Thyroid cancer represents approximately 1% of newly diagnosed cancers and is the most common endocrine malignancy. Papillary thyroid carcinoma (PTC) is the main form of nonmedullary thyroid carcinoma, accounting for approximately 80% of all thyroid cancers. PTC is mostly sporadic, whereas 5 to 10% are familial. The incidence of PTC is increasing in recent decades, but this may be due to improved diagnostics [1]. Although the etiology of PTC is not well characterized, it is clearly influenced by both genetic and environmental factors. Genetic predisposition plays a major role, as evidenced by case control studies [2]. In the virtual absence of high-penetrance Mendelian-type causative genes, the genetic factors can likely be attributed to many low-penetrance DNA variants in the human genome [3]. Recently, significant advances have been made in searching for DNA variants predisposing to PTC through genome-wide association studies (GWAS) and target gene studies in European populations, and replication studies in Japanese and Korean, and two-step candidate-gene association study in Spanish population groups have demonstrated that rs965513 (chromosome 9q22.33) and rs944289 (chromosome 14q13.3) display the strongest association with the risk for PTC. Aim of the study was to identify the association of the single nucleotide polymorphisms of the FOXE1 (rs 965513) and NKX2-1 (rs 944289) genes and papillary thyroid cancer among the Kazakh population.

Materials and Methods. Association of the NKX2-1 (rs944289) and FOXE1 (rs 965513) genes with papillary thyroid cancer in the Kazakh population was assessed retrospectively. Each of the study participants gave written informed consent to participate in the study, including blood sampling for genetic research. The study protocol was approved by the local Ethical Committee of the Semey State Medical University No. 2 dated March 18, 2015. The research work is performed in accordance with the principles of the Helsinki Declaration.

Results. Association of these SNPs in Kazakh population in a sample of 485 sporadic PTCs (90.3% females, mean age 54.78 ± 13.3 y.o., 18 – 87 y.o., range) and 1008 controls (78.7% females, mean age $39.02.1 \pm 15.8$ y.o., 15 – 83 y.o., range) was assessed. The next significant associations were identified in the multiplicative model of inheritance adjusted for age and sex: rs965513 ($p=1.34E-16$; OR=2.252, 95% CI 1.858 to 2.730) and rs944289 ($4.55E-05$; OR=1.444, 95% 1.210 to 1.724). Results demonstrated that the frequency of risk alleles of rs965513 and rs944289 in Kazakh population was intermediate between typical Asian and European populations.

Conclusion. Existence of genetic determinants of susceptibility to PTC in Kazakh population was confirmed.

Perspectives of future research. Development of genetic map of associations between thyroid gland's cancer-specific markers of in Kazakh population.