

270. GLYCATION. A STUDY ABOUT REGENERATION

Gheorghe Secu, Doina Turcan, Boris Dragan

Chair of Human Physiology and Biophysics, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

Introduction: Glycation is a chemical process in which proteins are conjugated with glucose, it is characteristic for persons who are suffering for insipid diabetes, but also it is common in cases of a high level of blood glucose. With reference to organism different functions degeneration, including a bad angiogenesis, caused by glycation, it was purposed to observe how a high sugar alimentation would influence the time of regeneration in an animal organism.

Materials and methods: For this study, was taken 40 mice and separated in 6 groups, I- 10 mice, about 1.5 years old, high sugar diet, II- 10 mice, about 1.5 years, ordinary food, III- 5 mice, about 7 month old, high sugar diet, IV- 6 mice, about 7 month old, ordinary food, V- 3 mice, about 8 month old, high sugar diet, VI- 6 mice, about 6 month old, high sugar diet. At 10-th day, a small incision on lower limb was did on each mouse, after, it was observed the time of regeneration in each group. As food was served: in groups with ordinary food, wheat, bread, carrot, beet; in groups with high sugar diet, wheat, bread, carrot, beet, sugar and different sweets.

Discussion results: In first days of experiment, it was observed that groups of mice, which had a ordinary diet were more active, they ran and played more than groups with a high sugar diet. Also it was determined that groups of mice with high sugar diet like vegetables more than groups without sugar supplement. After incisions this processes also was common. Analyzing regeneration, it may be said that, in first days after incisions it was observed that in groups of elder mice and with ordinary food, animals felt better, and regeneration had a higher speed than group with a high sugar diet. Anyway at the final of experiment their results in regeneration was approximatively equal. In younger groups in firs days also was present this phenomenon, but it continued, and in the end groups with ordinary diet had results better with about 1-2 days than groups with high sugar diet. Also it was noticed a strange thing, mice with high sugar diet had a strange fur, like it was wet or something like that.

Conclusion: In younger mice, the speed of regeneration is higher when alimentation is ordinary than when alimentation is rich in sugar, in elder mice the speed of regeneration is approximatively equal. Remain to demonstrate this not only through subjective methods, but also through objective like histochemical methods.

271. HLA – A, HLA – B, HLA – DR ALLELE FREQUENCIES BETWEEN KIDNEY RECIPIENTS WITH DIFFERENT BLOOD GROUP

Severija Pažemeckaitė

Scientific adviser: Skrodenienė Erika, Lithuanian University of Health Sciences

Introduction: Human leukocyte antigens (HLA) play a central role in the cellular and humoral immune responses that determine the outcome of a transplant. The extensive polymorphism of HLA poses a major barrier to successful transplantation.

Blood groups refer not only to genetically encoded erythrocyte antigens but also the immunologic diversity expressed by other blood constituents, including leukocytes, platelets, and plasma. The ABO blood group system has the single most important blood group antigens. Kidney donors must have a compatible blood type with the recipient for the transplant to be accepted by the recipient's organism and immune system.

Aim: To evaluate kidney recipients' HLA allele frequencies among patients with different blood groups.

Objective:

1. To determine the most frequent HLA – A, HLA – B, HLA – DR alleles among kidney recipients.
2. To compare HLA – A allele frequencies among kidney recipients with different blood groups.
3. To compare HLA – B allele frequencies among kidney recipients with different blood groups.
4. To compare HLA – DR allele frequencies among kidney recipients with different blood groups.

Methods: The retrospective data analysis of patients who were in the waitlist for kidney transplant in Hospital Lithuanian University of Health Sciences Kaunas Clinics during years 2013 – 2014 was performed. The following data was analyzed: ABO blood group antigens detected using column agglutination technique and class I (HLA – A, HLA – B), class II (HLA – DR) HLA antigens, detected using either lymphocytotoxic or molecular biology method. Data analysis was performed using Microsoft Excel and SPSS 19.0 software package. To assess the significance of the results the method of chi-square (X²) was used, assuming the results to be statistically significant with $p < 0,05$.

Results: The study included 250 LUHS Kaunas clinics patients waiting for kidney transplant. The most frequent (rate >8%) HLA-A, HLA-B, HLA-DR alleles were determined. The most frequent of the HLA-A alleles were 1 (8.8%), 2 (30.8%), 3 (16%), 11 (8%). Among HLA-B, the most frequent were 7 (28%), 8 (10.8%), 13 (10%). And among HLA-DR alleles: 1 (15%), 4 (12%), 7 (13.2%), 8 (8%) and 15 (8.8%). HLA-A 11 allele presence among different blood groups was statistically significant ($p = 0.008$); 36 out of 250 patients had this allele, it was detected in different blood groups in the following frequencies: O ($n = 11$; 32.4%), A ($n = 8$; 23.5%), B ($n = 10$; 29.4%), AB ($n = 5$, 14.7%). HLA-B 7 allele presence among different blood groups was statistically significant ($p = 0.042$), 65 out of 250 patients had this allele, it was detected in different blood groups in the following frequencies: O ($n = 26$; 43.3%), A ($n = 22$; 36.7%), B ($n = 9$; 15.0%), AB ($n = 3$; 5%). HLA-DR 8 allele presence among different blood groups was statistically significant ($p = 0.028$); 33 out of 250 patients had this allele, it was detected in different blood groups in the following frequencies: O ($n = 11$; 34.4%), A ($n = 10$; 31.3%), B ($n = 5$, 15.6%), AB ($n = 6$; 18.78%). The presence of other HLA-A (1, 2, 3), HLA-B (8; 13) and HLA-DR (1; 4; 7; 15) alleles in blood groups was not statistically significant, $p > 0.05$.

Conclusions: 1. The most frequently observed alleles were the following: HLA–A: 1, 2, 3, 11; HLA–B: 7, 8, 13; HLA–DR: 1, 4, 7, 8, 15.

2. HLA–A 11 allele dominated between kidney recipients with O and B blood groups.

3. HLA–B 7 allele dominated between kidney recipients with O and A blood groups.
4. HLA–DR 8 allele dominated between kidney recipients with O and A blood groups.

Keywords: HLA-A, HLA-B, HLA-DR.

272. THE PAIN MANAGEMENT AND KNOWLEDGE OF NONSTEROIDICAL ANTI-INFLAMMATORY DRUGS (NAIDS) SIDE EFFECTS LINK TO GENDER

Severija Pažemckaitė, Akvilė Ūsaitė

Scientific adviser: Albinas Naudžiūnas, MD, PhD, Professor, Lithuanian University of Health Sciences

Introduction: Pain is a common medical problem, and relief of pain is an important therapeutic goal. Although mild and moderate pain by outpatients is most commonly treated with over-the-counter drugs. Over the past decade, there have been growing concerns about the harm — abuse, as well as serious injury and death — caused by the use of over-the-counter painkillers. These concerns have emerged in parallel with the evolving understanding of the importance of pain management in medical care. It's important to maintain the balance between providing access to pain medications for those who need them, and on the other hand, managing the variety of risks posed by painkilling drugs. Especially nowadays when drug consumption between society has increased significantly. More and more people have been hospitalized because of these drugs side effects. This fact shows that society in Europe aren't informed about over-the-counter painkillers harmful influence to their health.

The aim of this study is to evaluate factors influencing non prescription drugs against mild-moderate pain choice.

Objectives:

- To determine and compare the most frequent pain type in men and women groups;
- To compare the frequency of NAID's used in pain management in different gender groups;
- To evaluate the Lithuanian citizens knowledge about NAIDs side effects and compare it in gender groups.

Materials and methods: The online questionnaire form was applied for two biggest Lithuania's cities - Vilnius and Kaunas – citizens. Total 99 respondents in the age of 19-80 years were interviewed. According the gender respondents distributed equally by 51 (51.1%) males and 48 (49.9%) females. IBM SPSS Statistics 19.0 version. For categorical data analysis χ^2 and Fisher's exact tests were performed. $P < 0.05$ was evaluated as statistically significant.

Discussion results: Most women were tend to suffer from pain 1 time per month (41.2%) and the most of men (39.6%) indicated suffering from pain rare than 1 time pro six months, $p = 0.003$. The women were more likely to mark gastric ulcers (68.9%), renal insufficiency (68.4%) as the NAID's side effect than men (31.1 % and 31.6 5 respectively) The mostly women uses NDAIS for menstrual (66.7%), headache (74.5%), and muscle pain (17.7), as the men uses it for back pain (43.8%) and headache (35.1%), $P < 0.05$. Women (66.7 %) were more likely to choose ibuprofen as the man (41.7%), $p < 0.05$. In other NAIDS the consumption choice does not statistically differ.