

IPSCS International Medical Students' Congress In Novi Sad

RHO-KINASE ACTIVATION CONTRIBUTES TO HYPERTENSION IN RAT MODEL

Field of medicine: Pathophysiology
Abstracts

GAHOR AMON ETLOP
Tamás Csapó, Jodya Ruzsai, Ágnes Csikvari, András Szalai, Robert Pócskai, István Földi, Zoltán Papp, Anna Tóth
Country: Hungary
Faculty: Medical Faculty Debrecen

Background: According to recent studies, approximately 20% of the world's adults are estimated to have hypertension. In contrast the proper treatment is still not found.

Aims: Our aim was to characterize the spontaneously hypertensive stroke prone (SHRSP), and the normotensive wistar-kyoto (WKY) rat strains to find the possible difference in their blood pressure and renin-angiotensin system.

Material and methodology: In our experiments, we detected the diameter changes of carotid intima-media thickness and the contractile force of the femoral artery. We also measured the body and the heart weight, and then the blood pressure.

Results: The heart/body ratio (0.0047), the systolic (216±12 Hgmm) and diastolic (135±8 Hgmm) blood pressure of the SHRSP was significantly higher than in WKY was (0.0027, 147±9 Hgmm, 113±7 Hgmm). Myogenic tone was similar in the two groups. After using Fluo-4, intracellular calcium concentration (measured as fluorescence) was higher in the SHRSP group (52.5±6.2%) than in the WKY group (34.4±9.3%). In the case of the femoral artery, treatment with 10⁻⁶ M A23197 resulted in higher contractile force in SHRSP (10.3±1.7 mN) than in WKY (6.5±1.2 mN). Perfusion with forskolin resulted in the normalizing the level of the contractile force in the SHRSP group (decreased to 6.3±1.8 mN), while it had no effect on the contractile force of the WKY group (6.3±1.6 mN). In case of using semaphorin we detected similar reaction.

Conclusion: According to our results, the Rho-kinase system probably plays an important role in the pathogenesis of high blood pressure, and better understanding of the pathogenesis may lead to hopefully more effective drug development.

Key words: Hypertension, Rho-kinase system

IPSCS International Medical Students' Congress In Novi Sad

STRESS RESPONSE THROUGH CORTICOSTEROID CONCENTRATIONS

Field of medicine: Pathophysiology
Abstracts

ALEXANDRA VILK
Ana de Nanda Cruz
Country: Spain
Faculty: Faculty of Medicine X

Background: Stress response is complex phenomenon. Hypothalamic-pituitary-adrenal axis is one of the main pathways of stress response. Measurement of corticosterone and of corticosterone metabolites in the urine is a common method to study the stress response.

Aims: Our aim was to study the stress response in a group of women with a history of miscarriage and to compare the results with a group of women without a history of miscarriage.

Material and methodology: The group of women with a history of miscarriage was divided into two groups: one group of women with a history of miscarriage and one group of women without a history of miscarriage. The group of women with a history of miscarriage was divided into two groups: one group of women with a history of miscarriage and one group of women without a history of miscarriage. The group of women with a history of miscarriage was divided into two groups: one group of women with a history of miscarriage and one group of women without a history of miscarriage.

Conclusion: Stress response is a complex phenomenon. Hypothalamic-pituitary-adrenal axis is one of the main pathways of stress response. Measurement of corticosterone and of corticosterone metabolites in the urine is a common method to study the stress response.

Key words: Stress, urinary cortisol

Abstract Book 2013

International Medical Students' Congress In Novi Sad