

death of cells. In this regard, in the acute period of myocardial infarction it is pathogenetically justified to use drugs that can affect the metabolism of cardiomyocytes and restore the course of bioenergetic reactions in the cell. Aim of study - to evaluate the SERM cardioprotective effects in the conditions of acute myocardial infarction modeling with the use of the ST2 marker. Materials and methods: The experimental part of the work was performed on 120 mature rats - males weighing 190-230 grams. Small-focal acute myocardial infarction was modeled by the introduction of a coronarospasm agent - pituitrin and $\beta_1, 2, 3$ isoprenaline adrenomimetic for 3 days. The investigated drugs were administered intraperitoneally 20 minutes after the injection of isadrin for 3 days at the above stated doses. The presence of myocardial infarction was confirmed by electrocardiographic study, as well as the presence of troponin I in blood plasma. The directivity and severity of pathobiochemical processes in the cardiac tissue, as well as the effect of the studied drugs on them, were studied through the enzyme-linked immunosorbent assay concentration in the heart homogenate of nitrotyrosine, homocysteine, in blood plasma - ST2. Results: Systematic administration of a corona-spastic agent to laboratory animals led to a gradual, progressive ischemic lesion of cardiomyocytes. Biological marker of myocardial infarction Troponin, ST2 I was registered on day 3 after the administration of pituitrin and isadrin in the blood plasma of the control group. Using selective receptors modulators and reference preparations (thiotriazoline, capicor) in experimental therapy of rats with experimental myocardial infarction promoted the normalization of biochemical processes in cardiomyocytes. However, the effect of the drugs under study was unidirectional, with varying degrees of evidence. All the drugs reduced marker products of oxidative stress with statistical reliability. The most pronounced effects were displayed by the selective modulators of estrogen receptors - toremifene and tamoxifen, which decrease of ST2 in blood plasma (by more than 46%) provides the realization of the cardioprotective properties of IL 33. In addition, SERM can limit the development of oxidative and nitrosyl stresses, leading to a decrease in the concentration of homocysteine and nitrotyrosine in the heart. Interaction of these effects of tamoxifen citrate under conditions of acute cerebral ischemia led to a pronounced cardioprotective effect, increasing the percentage of surviving animals to an average of 75%. The cardioprotective effects of selective estrogen receptor modulators established by us are an experimental foundation for the relevance and prospects of further research in this direction.

PHYSICAL DEVELOPMENT OF CHILDREN IN CONDITIONS OF ATMOSPHERIC POLLUTION

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Aim and objectives. Hygienic evaluation of indicators of physical development of children who live in conditions of anthropogenic pollution of atmospheric air of modern industrial cities. Materials and methods. To study physical development of children, medical examination of school-age children in 3 regions of Zaporizhzhia has been conducted: in a conventionally pilot region and in the 2nd and 3rd research regions. The study of physical development of children included the specification of height and weight, chest circumference and excursion. Results: Body length of boys of 7-10 years old in the research regions was 4,5 cm (3,44%) longer in comparison with the indicator of the boys in the pilot region, as for the girls, the length was 4,3 cm (3,31%) longer. The average indicator of weight of children of the research regions also exceeded the indicators of children of the pilot region: about 3,3 kg (11,93%) among the boys and 2,7 kg (10,17%) among the girls. Chest excursion in the research regions was lower: 5,27 and 6,37 cm ($p < 0,05$) correspondingly, and 5,12 and 6,07 ($p < 0,05$) among the girls correspondingly. It has been identified that there are more disharmonically developed children in the research regions than in the pilot region (31,6%, 33,4% and 25,31% correspondingly). Conclusion: Younger pupils who live in the atmospherically polluted regions, the activation of growing processes, probable exceeding of the weight indicators, chest excursion decrease have been identified. It is well-known that in modern circumstances delayed and accelerated development of children should be considered as a factor of pathology emergence.