also elevated compared to control rats. WRS decreased the concentration of L-arginine, NO precursor, in blood plasma ($p<0.05$). Pretreatment with T-34 caused 27% ($p<0.05$) decrease of GM ulceration area, at that NOS activity decreased for 45% ($p<0.05$), iNOS activity diminished for 60% ($p<0.01$) compared to the effect of WRS. Decrease of NO ($p<0.05$) and tendency to decrease of TBA products content in GM were also noted in T-34-pretreated rats on the background of WRS, whereas L-arginine concentration in plasma increased ($p<0.05$). In mucous membranes homogenates of the small and large intestine of T-34-pretreated rats on the background of WRS the tendency to decrease of NOS activity was found, whereas TBA products content did not change significantly.

WRS induced an acute rise of nitrosooxidative stress parameters in mucous membranes of the stomach, small and large intestine. Tripeptide T-34 exerted cytoprotective effect towards mucous membranes of the examined digestive organs, mediated mainly by the decrease of inducible NOS activity. The effect of T-34 on GM was superior to its action on small and large intestine.

NARCOTIC ANALGESICS: ANGIOPATHIC EYE CHANGES IN RATS

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Key words: eyeball, narcotic analgesics, vascular tunic, experiment

Pain constitutes up to 90% of all patient complaints in primary health care, so effective pain control and proper drug therapy are relevant problems. However, besides the appropriate use of analgesics for pain control, the gross misuse of analgesics a growing epidemic recent years. The prevalence rate of opioid use (at least once a year) is 61.0/ per 1000 adults in the USA and up to 27.0/ per 1000 adults in Europe (RecoveryBrands, 2013). According to the data of UNODC (United Nations Office on Drugs and Crime) total number of individuals using opioids attained 33 million people in 2014.

Modeling of the long-term effect of narcotic analgesics was performed by using a semi-synthetic opioid analgesic Nalbuphine. The study was carried out on 48 mature white male rats aged 3.0-3.1 months and with the body weight 160-180 g. All experimental procedures were approved by the University Animal Care and Use Bioethical Committee. The studies were conducted with application of morphological, in particular, histological, electron microscopy and morphometric methods of investigation; mathematical; modeling the prolonged effect of the opioid. The research material was presented by the specimens of the eyeball vascular tunic, consist of the iris, ciliary body and choroid.

After 2 weeks of injecting Nalbuphine to the rats choroid, ciliary body and iris are clearly differentiated both, in the eyeball vascular tunic of the experimental animal such in the control animal The administration of Nalbuphine to white rats over a 4 week period of time causes the following lesions in the eyes of the rat: in the endothelial and basement membrane of the microcirculation, in the epithelium of the ciliary processes, in the cellular and non-cellular elements of the iris and in the choroid. After 6 weeks of injecting Nalbuphine to the rats there are observed deep destructive changes in the eyeball vascular tunic. Arterioles' walls are thickened due to sclerosis. Thin-walled, elongated venules prevail. Choriocapillar layer is destroyed. Layers of the iris are not clearly differentiated. Ciliary processes are fragmented, epithelium that covers them is disorganized, the processes are thickened, shortened.We have demonstrated changes of restructuring angioarchitectonics of the eyeball vascular tunic which indicates the development of angiopathy, potentially contributing to circulatory disorders of the organ of vision.

As a result of these angiopathic changes we expect a deterioration of visual function in conditions of long-term use of narcotic analgesics. The first signs of impairment of the vascular tunic ultrastructure are noticeable already after two weeks of the experiment. 6-weeks long injection of the opioid causes irreversible destructive changes in the rat's eyeball vascular tunic.

THREE FACTOR MODEL OF ADOLESCENT RISKY BEHAVIOR

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Key words: mental health, risky behavior, adolescents

Adolescent risky behaviors have lately become a reason for considerable concern of mental health professionals as the grounds for why a teenager would consciously and willingly compromise their health and, in some cases, life still remain unclear. Results of multiple researches run in different cultures indicate various reasons for risky behavior and suggest it be a biopsychosocial phenomenon.

Three groups of schoolchildren aged 12-18 y.o. – adolescents that do not practice risky behaviors, adolescents that get engaged into risk from time to time, and adolescents who reported active engagement into multiple risky behaviors – were interviewed for studying their psychological features. The differences between the three groups were so significant that it allowed to conclude that regular engagement into any type risky behavior leads to major emotional, cognitive, psychological, personality, and social levels.

We found out that a wide array of psychological features associated with engagement into risky behaviors falls into three-factor model. The first factor (32,8% variation share) we called 'Negative evaluation' as it comprises features like life unsatisfaction (χ^2 = 0,7409), lost of interest to the environment (χ^2 = 0,6710), irritability (χ^2 = 0,6506), sadness (χ^2 = 0,6471), loneliness (χ^2 = 0,6117), difficulty in making decisions (χ^2 = 0,5980), helplessness (χ^2 = 0,5955), anxiety (χ^2 = 0,5796), perceived stress (χ^2 = 0,5480), self-criticism (χ^2 = 9,5129), feeling a looser (χ^2 = 0,5027). The heightened levels of negative feelings have high correlations with risky adolescents' levels of depression and anxiety.

The second factor (10,4% variation share) – 'Difficulties perception' – is made up of such features as emotional reactions to difficulties (χ^2 = 0,8918), admitting having difficulties (χ^2 = 0,8752), durability of difficulties (χ^2 = 0,8311), believing that difficulties influence relations with others (χ^2 = 0,6996). We suggest that negative emotional states that dominate in the first factor predispose teenagers to experience emotional, psychological and social difficulties. Probably, perception of difficulties as long-standing followed up with negative feelings leads to formation of steady idea that these difficulties are impossible to overcome. Such attitude affects the feeling of helplessness, which in its turn can provoke tunnel thinking and cognitive rigidity that are associated with suicide activity.

The 'Problems with behavior' factor (6,8% variation share) includes hyperactivity (χ^2 = 0,7594), feeling punished (χ^2 = 0,5545), behavioral problems (χ^2 = 0,5475). We believe that most behavior problems that a risky teen experiences affect their social connections. Due to that, a risky teen has a little chance to get integrated with the community.

We presume that when starting risky behavior adolescent can consider it as a way to grow their personal experience. However, regular engagement into such behavior inevitably leads to increase in the number and frequency of its types and results in significant personality transformations. Being involved into risky behavior intensifies negative feelings, increases depression and anxiety, weakens stress-resilience. All these can provoke suicidal ideation that could later take practical turn.