

*Materials of Conferences***PATHOMORPHOLOGICAL CHANGES
UNDER CONTUSION TRAUMA
OF SPINAL CORD IN RAT**

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A heavy contusion injury of pith has been reproduced under narcosis among mature rats of both sexes that belonged to Dowley-Spreg line according to the description (Ryabov and co-authors, 2014). Laminectomy of a spine curve within one pith sector of level Th₈-L₁. A flyweight has been thrown down to a solid brain capping of pith. Mobility of rear limbs has been lost completely among rats after a heavy contusion injury of pith. The animals could not maintain their bodyweight and crawled on front limbs. Claws grew intensively on rear limbs of rats in comparison to their front paws. The animals experienced troubles when they tried to bite them off after pith injuries of the mentioned localization. In order to remove complications of excretory system (haematuria) and prevent development of inflammatory complications, we used gentamicin (4 mg per 1 kg of an animal's weight intramuscularly). Rats that survived became chronics and mobility of their rear limbs has not been reproduced even after 4 months of the experiment. Material of the survived animals has been fixed in solution of paraformaldehyde on 0,1 M phosphate buffer and then fixed up in 1% osmic acid. Material processing and its placing into epoxide resin araldit have been carried out according to the guidance (Pavlo-

vich and co-authors, 2011). The damaged sectors of pith have been placed in sprue capsule along and across its longed axis. Half-thin 1 mm wide cuts have been colored with toluidine blue. Condition of cinerea and white substance of pith has been evaluated on cuts. Insults have been discovered in pith straight after the surgery. Destructive damage of motoneurons of front pith horns have been observed on day 2 after contusion. In longer term after the injury hollow spaces were formed in the area of pith damage. It could be located in left or right half of pith or in the center of it, or it could form as two hollow spaces, this phenomenon can be observed on across cuts of pith. At the same time cinerea and white matter of pith were exposed to significant destructions. This hollow space kept on increasing in its length and by 3–4 months after the injury it spread in both directions from the pith damage area by several millimeters, and it was expressed in cephalic direction more than in caudal. Ependymal cells of pith reproduced pith channel in its initial place among a number of rats. Sometimes multi-gap formations emerged (possibly multiple channels). Rarely ependymal cells did not form channels with gaps, but lined across pith hollow space from its dorsal wall to ventral. Insignificant changes in myelinated nervous fiber were have been revealed in front (motor) roots of pith. Also, no significant alterations have been discovered in sciatic nerve and muscles that were innerved in lower limbs of an animal.

The work is submitted to the International Scientific Conference «Modern high technologies», Jordan, June, 9–16, 2014, came to the editorial office on 31.03.2014.