PECULIARITIES OF TATTOO PIGMENT DISTRIBUTION IN THE SKIN

Kalashnikova S. A. [1]*, *Karymov O. N.* [2], *Polyakova L. V.* [1]

[1] Pyatigorsk Medical Pharmaceutical Institute of Volgograd Medical State University of the Ministry of Health Care of Russia, Pyatigorsk; [2] Moscow Scientific and Practical Center of Dermatovenerology and Cosmetology of the Department of Health of Moscow, Moscow

* kalashnikova-sa@yandex.ru

Key words: *tattoo, layers of skin, pigment for tattoo*

Aim. To describe the features of tattoo pigment distribution in the skin.

Material and Methods. An experimental study was carried out on 30 nonlinear white rats (males) who were tattooed with black ink. The animals were sacrificed on 10th day. The skin was sampled, processed, and stained with hematoxylin and eosin according to the standard protocol for the pathohistological examination.

Material and Methods. In the early stages after tattooing, the accumulation of the pigment was observed in the superficial layers of derma, particularly in the perivascular area of the papillary layer. The pigment was distributed in a various pattern, from the relatively large well-distinguishable granules directly under the epidermis to the «dust-like» infiltration of the papillary dermis. Loose connective tissue of papillary layer showed the features of edema with uneven filling of the blood vessels. The margination of leukocytes in the blood vessels was observed. The degree of the epidermis adherence to the papillary layer of dermis varied, and it depended on the severity of the skin edema. In some skin areas there were the clefts between the basal layer of epidermis and the papillary layer of dermis. In the reticular layer of dermis, the foci of leukocyte infiltration mainly of neutrophils with few eosinophils and lymphocytes were identified.

Conclusions. The described pattern of pigment distribution within the tattooed skin showed the irregular distribution of ink and a pronounced inflammatory reaction to the injected pigment in the early tattoos.

REACTION OF THE LYMPHATIC SYSTEM TO TATTOOING

Kalashnikova S. A. [1]*, *Karymov O. N.* [2], *Polyakova L. V.* [1]

[1] Pyatigorsk Medical Pharmaceutical Institute of Volgograd Medical State University of the Ministry of Health Care of Russia, Pyatigorsk; [2] Moscow Scientific and Practical Center of Dermatovenerology and Cosmetology of the Department of Health of Moscow, Moscow

kalashnikova-sa@yandex.ru

Key words: *tattooing, lymph node, tattoo pigment*

Aim. To describe the regional lymphatic system reaction to the tattooing.

Material and Methods. Under anesthesia, tattooing was performed in the back region of 30 nonlinear white rats (males). The experimental animals were sacrificed on the 10th day after tattooing. The samples of tattoo areas and regional lymph nodes were processed and stained with hematoxylin and eosin in compliance with the standard protocol and histologically examined.

Results and Discussion. The pathohistological examination of the lymph nodes showed that the main accumulation of the tattoo pigment occurred along the lymph node sinuses. The ink accumulation was mainly detected in the marginal sinus and medullary sinuses as well. In the lymph nodes, the boundary between the cortex and medulla was not clearly observed due to the heavy pigment infiltration. In the cortex, the follicles with poorly-defined germinal center were identified. The cellular component of the follicles in the cortex included lymphocytes, plasma cells and few macrophages. In the periphery of the germinal centers the pigment deposits were scanty. In the medulla, the pigment deposits were identified along the cords and sinusoids.

Conclusions. The lymphatic system was involved into the spread of the tattoo pigment via the regional lymph vessels and lymphatic nodes.

POST-TRAUMATIC USE OF ERYTHROPOETIN AND LOW DOSE IONISING RADIATION TO PREVENT SECONDARY DAMAGE IN SPINAL CORD TRAUMA

Kaptanoğlu Erkan [1], *AtasoyBeste Melek* [2], *Bozkurt Süheyla* [1], *Güvenç Yahya* [1],. *Pınar Ertuğrul* [1], *Şahin Ali* [1], *Surucu Selcuk* [3]

[1] Marmara University, Institute of Neurological Sciences, Istanbul; [2] Marmara University, Faculty of Medicine, Istanbul; [3] Koc University, School of Medicine, Istanbul

Key words: *spinal cord ınjury, erythropoietin, ıonizing radiation, trauma*

Background. As clinical outcome of acute traumatic spinal cord injury, many patients are forced to sustain their lives with paralysis. These patients face very difficult medical and social care and many complications over the years. In our study.

Aim. İt was planned to use combined treatment modality of erythropoietin and ionizing radiation in the traumatic spinal cord injury model in rats. This study is approved by the Experimental Animal Research Ethical Committee of Marmara University.

60 Sprague Dawey rats were divided into following groups:

Trauma	10
Trauma+IR60	10
Trauma+IR200	10
Trauma+EPO	10
Trauma+EPO**+**IR60	10
Trauma+EPO**+**IR200	10