to bright-red. Blood and lymph vessel membranes from *intima* to *externa* have been clearly differentiated by color, erythrocytes have taken brown stain. Epineurium, perineurium and endoneurium of peripheral nerves have been clearly differentiated. Non-myelin nerve fibers of autonomic innervation have been clearly contoured both in neurovascular bundles and within proximal tissue.

Conclusion. 1.The present research allowed to receive "Patent on useful model"№ 65245 «Nerve fibres staining method». 2. The presented method of histological staining of nerve fibers is employed in a number of scientific studies at Kharkiv national medical university. 3. The developed method of histological staining of nerve fibers can be widely used in relation to any structures of the nervous system. 4. The present method of histological staining of nerve fibers is the most efficient, potent, simple and it doesn't require much time consumption or financing facility.

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ANATOMICAL ASPECTS OF LIVER TRANSPLANTATION

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Background. Liver is a vital, multifunctional, unpaired organ. High regeneration ability of the liver, the progress of surgery, pharmacology and technology made the liver transplantation the golden standard in treatment of liver disease in the terminal stage. Statistical analysis of the literature shows that the most common indication for transplantation in adults is the chronic hepatitis C; alcoholic liver cirrhosis, which leads to necrosis of liver cells, primary biliary cirrhosis, cryptogenic cirrhosis, autoimmune diseases, hepatic failure, viral hepatitis, metabolic disorders, malignant neoplasms and liver damage caused by other reasons. The main indications for the liver transplantation in children (depending on age) are the cholestatic disease, metabolic disorders, acute liver failure, liver cirrhosis.

The first liver transplantation in the world was performed by an American transplantologist Thomas Starzl in 1963 in Dallas. Later Starzl organized first center of transplantology in the world in Pittsburgh (USA), which is bearing his name now. By the end of the 1980s under the leadership of T. Starzl more than 500 liver transplants were performed in Pittsburgh every year. Currently, indications for liver transplantation are: • irreversible liver disease with a life expectancy of less than 12 months. • chronic liver disease that greatly reduces quality of life and ability to work. • progressive liver disease, with a life expectancy less than in the case of liver transplantation.

Results. With the improvement of surgical techniques for transplanting, conditions for storage and transport of transplantable liver, opening of new centers of the transplantology, the number of liver transplants has steadily increased. In 1997, the world held annually up to 8000 liver transplants, now this number has risen to 11,000. The graft is often taken either from the living donor or from the corpse. Since

1963, there appeared a practice to replace injured liver by the graft taken from the corpse. But in recent years an alternative has appeared. It has become possible to make liver transplantation from one corpse to two patients, and to transplant the part of the liver from living donor to the child. During preparation for a liver transplant surgeons are facing the series of challenges, which could not be solved without a precise knowledge of anatomy: besides impeccable technical implementation of the operation, it is necessary to assess accurately the anatomy of blood vessels and bile ducts of the donor's liver. Also it is extremely important to preserve the portal blood flow, to calculate the volume of liver, which is taken from the donor. The mass of the graft should be 1% or more of body weight of the recipient. Several techniques of liver transplantation are practiced. For children the II and III segments (left lobe) are transplanted more often. In adults, on the contrary, the whole right lobe of liver is often removed (V-VIII segments).

Conclusion. The introduction of the liver transplantation in the daily practice gives us a chance to cure many patients with liver diseases, which were considered unproductive in terms of their outcome previously. It is important to note that success in this area depends on the theoretical aspects of the study, and on the orientation in the human anatomy as a science.

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CONTENT OF COBALT IN SUBCELLULAR FRACTIONS OF HEPATOCYTES AND NEPHROCYTES OF RATS WITH COBALT HYPERMICROELEMENTOSIS

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Introduction. Anthropogenic pollution of environment is connected with microelements of heavy metals group. Technogenic microelementosis namely hypercobaltosis may cause the development of renal diseases. The question of cobalt influence on metabolic processes in kidney and liver is poorly understood.

The purpose of the investigation was to study the content of cobalt in subcellular fractions of hepatocytes and nephrocytes of rats with hypercobaltosis.

Materials and methods. Experiments were carried out on 1-month old rats of Wistar line. A solution of cobalt chloride was administered daily intragastrically through a probe during a month. Subcellular organelles (nucleus, cytosol, microsomes, mitochondria) were determined by differential centrifugation. The amount of cobalt was measured by atomic absorbtional photometry.

Results. It was established that the induced synthesis of proteins in hepatocytes was insufficient. It led to accumulation of cobalt in cellular organelles especially in mitochondria. The highest accumulation of cobalt (compared to other tissues) was observed in kidney cells. The distribution of metal in the subcellular fractions was increased in following line: nucleus → cytosol → mitochondria.