Results and Discussion. In the first group, when the water pressure reaches 0.5±0.1 bar. there was a rupture of the small curvature of the stomach. The rupture of the wall of an isolated esophagus was obtained at a water pressure of 1.2 to 1.4 bar. The burst pressure of the esophagus in groups 2 and 3 was 0.9±0.1 and 0.7±0.1 bar. There was always a rupture along the left lateral wall of the over-diaphragmatic segment of the esophagus. The maximum intraluminal pressure in the gag reflex with FGD was an average of 0.15 bar. without a significant difference between the stomach and esophagus.

Conclusions. The rupture of the wall of the stomach occurs at a lower intraluminal pressure than the rupture of the wall of the esophagus.The place of rupture of the esophagus is always the same. Intraluminal pressure, which occurs during vomiting, cannot lead to rupture of the esophagus wall, since it is much less than the burst pressure.

PANCREATIC B-CELL TRANSPLANTATION AS ONE OF THE MOST PERSPECTIVE METHODS FOR TREATING TYPE I DIABETES MELLITUS

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Key words: *diabetes mellitus, β-cells, transplantation, immunoprotection*

Background. Type I diabetes mellitus is an autoimmune endocrine disease caused by pancreatic islets destruction, and insulin deficiency leading to chronic hyperglycemia. Nowadays new methods of diabetes treatment such as insulin-producing cells therapy are being actively developed.

Aim. The main goal of this work is to evaluate advantages, disadvantages and prospects of modern β-cells transplantation techniques.

Material and Methods. Analysis of scientific literature from Medline and Scopus databases for the last 20 years.

Results and Discussion. The strategy of obtaining β-cells includes differentiation of stem cells, reprogramming of mature specialized cells, autologous or donor cells isolation and xenotransplantation technology.The process is associated with a minor surgical intervention. Thus, the cells are injected into the portal vein through a catheter, installed under the ultrasound control. Islet cells can also be transplanted to the liver parenchyma, the pulp of the spleen, splenic artery, rectus abdominis, peritoneal cavity, greater omentum and even subcutaneously. The main problem of β-cells therapy is still the immunoprotection of transplants. Leading strategies include drug immunosuppression and macro-or microencapsulation using biodegradable scaffolds. However, transplantation of autologous cells is more promising as it can remove necessity of immunoprotection at all.

Conclusions. High cost, complexity of implementation and uncertain consequences of such cell therapy create obstacles for its wide application in clinical practice. Existing methods do not allow the patient to get rid of the disease once and for all. Nevertheless, β-cells transplantation has great prospects as a technology that can radically change the approach to the treatment of diabetes.

EXPRESSION OF THE O-LINKED N-ACETYLGLUCOSAMINE CONTAINING EPITOPE H IN NORMAL MYOMETRIUM AND UTERINE SMOOTH MUSCLE CELL TUMORS

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Key words: *tumor, cell, myometrium, uteri, immunohistochemistry*

Aim. In the present study, we focused on uterine smooth muscle cell tumors and their adjacent normal myometrium to gain further insight into the expression patterns of epitope H in human tissues.

Material and Methods. The indirect immunoperoxidase method was applied using the mAbH and the monoclonal anti-cytokeratin 8 antibody (AbCK8) in 50 cases of typical uterine leiomyomas and in five of uterine leiomyosarcomas.

Results and Discussion. Epitope H showed: 1) intense immunohistochemical expression in 46% and moderate expression in 54% of uterine leiomyomas; 2) intense immunohistochemical expression in 40% and moderate expression in 60% of uterine leiomyosarcomas; 3) no difference in the immunohistochemical expression between leiomyomas and their adjacent myometrium and between leiomyosarcomas and their adjacent myometrium; 4) immunohistochemical expression of cytokeratin 8 was not detected in the normal and neoplastic smooth muscle cells; 5) Western immunoblotting showed that in the smooth muscle cells of the myometrium and leiomyomas, epitope H is localized in four polypeptides with molecular weights of 100, 61, 59, and 54 kDa, and 6) Western immunoblotting did not detect cytokeratin 8 in the normal and neoplastic smooth muscle cells.

Conclusions. The present results indicate fluctuations of the epitope expression levels in uterine smooth muscle cell tumors and their adjacent myometrium. Furthermore, indicated that cytokeratin 8, without being present in the cells of the myome-