

*Azərbaycan Respublikası Səhiyyə Nazirliyi*

*Respublika Dövlət Elmi Tibb Kitabxanası*



**V.Y.AXUNDOVUN 100 İLLİK yubileyinə həsr edilmiş  
elmi-praktik konfransın tezislər toplusu**



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**VƏLİ YUSİF OĞLU AXUNDOVUN  
100 illik yubileyinə həsr həsr edilmiş  
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Conclusion. On the basis of the direct anthropometry the regularities of body weight osseous component formation were detected at the stages of postnatal ontogenesis, which became apparent by different frequency of disharmony of body weight osseous component due to osseous component, first and foremost, among individuals of female sex. Judging by the example and the results of generic implementation of accumulated anthropometric data, the development of traditional methodology of anthropometry, and the substantiated innovative methodology, in particular, it is possible to ensure determination of ontogenetically disharmonic body build due to body weight osseous component, taking into account the ontogenetic features. Estimation of ontogenetic disharmony of body weight osseous component is related to anatomy, topographic anatomy, multiple clinical disciplines and may be used while considering the ontogenetic features of the body build in estimation of component analysis of its weight. The findings explain the age-sex differences in the frequency of dysfunctions formation, prenosological and nosologically explained pathological state as manifestations of general process of growth and development in postnatal ontogenesis.

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**Shklar A.S., Danylchenko S.I.**  
**Coordinate anatomy of kidney in ontogenesis:**  
**organometric characteristics at young age**

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Research in the field of renal clinical and individual anatomic variability of the renal portal has recently become crucial in connection with the implementation of minimally invasive organopreserving techniques and current methods of pre-surgical imaging of kidneys into nephrology and urology therapy. Endoscopic interventions on kidneys have led to significant decrease in the frequency of postoperative complications and reduce in duration of the postoperative period. In addition, the organopreserving surgical interventions on kidneys remain the subject of choice in surgical treatment of squamous cell carcinoma in patients with only one kidney, as well as in the case of apparent contralateral or bilateral renal lesions. In this way individual studies have proved that oncospecific five-year survival rate accounts for 100% after organopreserving operations on kidneys and 97,3% in case of radical nephrectomy. The anatomic basis for the development of surgical interventions, including the cases of organopreserving operations, is the idea about anatomical variability and patterns of the kidney structure, particularly, the shape and location of the renal portal.

**Purpose.** The research is aimed to define the organometric renal parameters as well as morphometric indices of renal portal in human ontogenetic group of 20-29 years.

**Object and methods.** 23 kidneys, taken from the dead bodies, aged 20-29 years, of both gender, who died as a result of accidents or died for the reasons not associated with renal diseases served as morphological material for study of renal portal anatomy on the stages of postnatal ontogenesis. The cadaver specimens have been studied in conditions of postmortem morphometry, based on Poltava Regional Medical Examination Bureau. The background material and morphometric data related to the anatomy of renal portal organometry and somatometry, obtained at different stages of the study, have been examined, taking into consideration ontogenetic periods according to the scheme of age periods of human ontogenesis. At the same time, a standardized age distribution pattern has been used to implement the outcomes into clinical practice in compliance with WHO recommendations (WHO, 1978-2000). Renal organometry has been performed according to the parameters of kidney height ( $L_H$ , mm), width ( $D_H$ , mm), thickness ( $P_H$ , mm) with measurement of anatomical section plane ( $S_H$ , mm<sup>2</sup>), using the point contact method, and kidney volume ( $V_H$ , dm<sup>3</sup>); surgical micromere with measurement precision up to 0,1 mm, point contact method and renal volumetry according to M.P. Burykh has been used. Kidney length ( $L_H$ ) has been measured in mm as the distance from the most remote points between its upper and lower pole, and the width ( $D_H$ ) has

been measured between inner and outer edges of kidney. During the morphometry of renal portal, its height ( $h_h$ , mm), height of renal portal plane ( $h_s$ , mm), anterior ( $b_{Ah}$ , mm) and posterior ( $b_{Ph}$ , mm) renal portal depth and its width ( $g$ , mm) has been measured. Renal portal plane ( $S_B$ , mm<sup>2</sup>) has been measured, using the point contact method, and the suggested index of renal portal plane has been calculated as kidney anatomical section plane and renal portal plane ratio ( $III_B = S_H/S_B$ ).

Therefore, the analysis of organometric data related to gender peculiarities of renal anatomy has established that in ontogenetic group of 20-29 yrs kidney height is reliably ( $p < 0,001$ ) lower, kidney thickness is reliably ( $p < 0,05$ ) bigger and relative plane of renal portal is reliably ( $p < 0,05$ ) smaller in male individuals, as compared to female ones. The analysis of morphometric data of renal portal has shown that in ontogenetic group of 20-29 yrs male individuals, as compared to female ones, have reliably ( $p < 0,05$ ) more frequently cases of anatomy-dependent narrow-angle entrance to the renal portal, and variability of linear dimensions of renal portal in women can indicate about the heterogeneity of its shape and location.

**Perspectives of further research.** Follow-up research will encompass the study of renal organometric characteristics and morphometric parameters of human renal portal in other ontogenetic groups.

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**Storchylo O.V.**

**The milk thistle fruits as a way of correcting and preventing the effects of irradiation parents two generations of their offspring**

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Nuclear technologies play an important role in energy supply of society, but a side effect of their use is an increased radiation background. Over the years a wealth of information on the effect of large doses of radiation on the human body was accumulated and has become increasingly important to study the effects of low doses, comparable to radiation background levels on the offspring of irradiated parents. A lot of research shows a high genetic effectiveness of irradiation in small doses. It is assumed that this can lead to radiation-induced genomic instability. In this regard, the search for ways to overcome the effects of radiation continues, among which all play an important role as a low-toxic herbal complex tools with a broad spectrum of action and mild prolonged effect. One of these medications is milk thistle *Silybum marianum* (G.), whose fruits contain a complex of biologically active substances, including silymarin, used to create a variety of hepatic protectors. Its effect is primarily due to the participation in the repair of the hepatocyte membrane, stimulation of protein synthesis by increasing the synthesis of p-RNA and changes in the qualitative composition of the membranes by increasing the amount of phospholipids and higher fatty acids. The small intestine, where occurs the final stages of the digestion of nutrients and absorption of formed monomers is the most radiosensitive part of the alimentary canal and from its functional activity to a certain extent dependent on the existence of the whole organism. The irradiation in small doses leads to disruption of the ultra structure of small intestinal mucosa, to a change in the lipid composition of the apical membrane of enterocytes, the viscosity of the lipid bilayer and to increasing of its permeability for inorganic ions, to a violation of the oxidation-antioxidant status of membranes. Given the membrane-active properties of silymarin and other components of milk thistle fruits can be expected their reparative effects on enterocytes. Therefore, in vivo experiments were used per os milled milk thistle fruits for correcting and preventing the effects of single-dose  $\gamma$ -irradiation of 0.5 Gy male rats for two generations of their offspring. It was found that effects of the fruits of *Silybum* differ substantially for the substrates of carbohydrate and protein origin, for different degrees of polymerization of these substrates and for different generations of offspring, as well as depending on the time of receipt of the fruits into the organism of male precursor relatively the moment of its exposure. It is shown that the assimilation per os by males per os of milled milk thistle fruits with food before irradiation

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