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АКТУАЛЬНІ ПИТАННЯ ТЕОРЕТИЧНОЇ ТА ПРАКТИЧНОЇ МЕДИЦИНИ

Topical Issues of Clinical and Theoretical
Medicine

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Morphometric assessment of renal hilum has been performed according to the complex of one- and two-dimensional parameters (height of renal hilum (h_h), height of renal hilum area (h_s), anterior (b_{Ah}) and posterior (b_{Ph}) depth of renal hilum, superior (g_s) and inferior (g_l) width of renal hilum and some other morphometric parameters of hilum and its indices).

The analysis of organometric data related to gender differences in kidney anatomy concluded that in ontogenetic group of 40-49 yrs the kidney thickness and width, as well as its volume, are reliably ($p < 0,05$) bigger in male individuals. Absolute indices of kidney volume, renal hilum area and index of renal hilum area reliably increased as compared with previous ontogenetic period; rate of increase in these indices is reliably greater among male individuals. The analysis of morphometric data of renal hilum allows to conclude that in ontogenetic group of 40-49 yrs the increase of indices of kidney height simultaneously with widening of the inferior width of renal hilum has been noted in male individuals, in contrast to females, due to growing of parenchymatous mass, leading to changes in kidney shape and location of its hilum and ENSP coordinates relative to the external organometric landmarks.

FORMATION, ETIOLOGY AND PATHOGENESIS OF GIANT CELLS

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Introduction: Giant cells are the cells that superior to their size common cell types. They can be as in normal so in pathological conditions. Cells that are encountered in normal conditions are divided into two types: megakaryocytes and multinucleate cells.

The formation of giant cells can occur in three ways:

1. By repeated nuclear division without cell division.
2. By merging multiple cells into one cell.
3. The combination of these two processes

Langhans' giant cells are characterized by a relatively small number of nuclei, generally less than 20, arranged in a circular peripheral arrangement within the giant cell.

Foreign body's giant cells (FBGCs) generally have much larger numbers of nuclei, greater than 20, which are arranged in an irregular form throughout the giant cell.

Osteoclasts are large multinucleate cells that specialized derived from the monocyte/macrophage haematopoietic lineage that develop and adhere to bone matrix, then secrete acid and lytic enzymes that degrade it in a specialized, extracellular compartment.

Morphologically, Touton cells appear as multinucleated giant cells with a ring of nuclei separating peripheral clear rim of cytoplasm from central. The peripheral cytoplasm appears clear due to high lipid content.

Aim: To investigate formation, etiology and pathogenesis of four types of giant cells: Pirogov-Langhans' giant cells, FBGCs, osteoclasts, and Touton's cells.

Methods: histological and immunohistochemical methods.

For our investigate we used 5 markers: OPN, MMP-1, S100, CD68 and Ki-67.

Results: FBGCs, Pirogov-Langhans' giant cells and osteoclasts are formed by migration and fusion. Touton cells are formed by the division, and cleave collagen type I. Comparing our results and the results of other researchers we came to the conclusion that there were some similarities between them.

Conclusion: All the cells which have been taken for the research have macrophage origin. The most active are FBGCs. The most active in cleaving collagen are Touton's cells and fusion is more typical for Pirogov-Langhans' giant cells and osteoclasts.

Giant cells are formed mainly by the merger, but also can find their way to be formed by endomitosis.