

institution of compensating type, are able to be used for improvement of the process of physical education within the scope of educational program.

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#### **FEATURES OF ROTATION OF INTESTINAL TUBE IN RAT**

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Rotation of intestinal tube (RIT) passes against hand in 4 stages of human embryogenesis. RIT in white rat was not described in literature. On first stage of RIT (on 90°) midgut is displaced on the right side from hindgut (colon) under pressure of hepatic right lobe. Growth of ventral (preportal) parts of liver predominates on second stage of RIT in man, including passing to the right side and under duodenum. Therefore head of pancreas (HP) grows to the left side with displacing of initial segment of jejunum under sagittal segment of colon and to the left side from midline, where loops of jejunum are formed. II RIT is absent in white rat: growth of dorsal (retroportal) parts of liver predominates, they displace inner organs to bottom of abdominal cavity. Therefore all small intestine remains on the right side from midline, hindgut is on the left side from midline and on the it at more caudal level. HP grows into mesocolon. Caecum with its oblique and sagittal position is on the left edge of caudal part of umbilical hernial sac, loops of ileum occupies the remaining, most part of the sac. III RIT in man manifests as transference of sagittal segment of colon together with caecum and loops of ileum to the right side from midline (transition from sagittal plane in frontal plane). III RIT inverts and reduces in rat:

1) after setting in abdominal cavity loops of ileum are directed by means of hepatic right lobe often to the left side from midline and they displace initial part of colon to the right side with formation its ventral loop;

2) jejunum forms loops on the right side from midline and they «leave» middle part of ascending colon on midline;

3) HP «stretches» colon to the right side with formation dorsal loop of colon, which includes transverse colon and ending of ascending colon (reduced transition from sagittal plane in frontal plane);

4) caecum makes similar turn to the right side (on  $\geq 90^\circ$ ) by means of traction of ileum and

remains under liver (IV RIT is absent in rat) or passes to the left side from midline and grows in caudal direct, to the left iliac fossa (inverse and reduced IV RIT).

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#### **MORFOGENESIS OF MESENTERIC LYMPH NODES IN RAT**

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I study development of mesenteric lymph nodes (MLN) in white rat, including 40 embryos of 12-21 days, the 10 new-born's (first day) and 40 rats of first month, on serial histological sections, staining by hematoxylin and eosin, picrofuxine, azur-II and eosin, silver nitrate with graphic reconstruction, and total preparations after injection of dark-blue mass of Gerota into mesenteric lymphatic bed. In the fetuses of 18-19 days cranial mesenteric artery and its branches invaginate into lumen of neighbouring mesenteric lymphatic vessels together with their endothelial walls and intermediate connective tissue. In result is formed common anlage of MLN as stromal tape. It becomes lymphoid tape in the fetus of 20 day. The tape narrows and loosens (decreasing of quantity of lymphocytes) in distal direct. In ventral direct from head of pancreas the lymphoid tape is discovered only in lumen of left mesenteric lymphatic trunk. Right mesenteric lymphatic trunk remains before head of pancreas by means of screening of wide cranial mesenteric vein. In the fetuses of 20-21 days this lymphoid tape is deformed (on sections it has crimped shape or consists of fragments with different sizes and shape) under pressure of neighbouring organs or in result twisting of root of mesentery. In the fetus of 21 day and new-born rat the tape is divided on the separate MLN with oval, round and bean's shape in connection with thickening of their capsules and accumulation of lymphocytes in their parenchyma. I didn't find MLN with tape form, but saw solid chain of paracolic MLN before head of pancreas. The central and possibly peripheral MLN lie along and about mesenteric lymphatic trunk, but MLN never interrupt it.

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