

disease are probable postprandial hyperglycemia, hyperinsulinemia, increased glycosylation of hemoglobin. Hyperleptinemia and hypoadiponectinemia are also factors in the burden of non-alcoholic steatohepatitis and obesity due to the progression of mesenchymal inflammation and cytolysis of hepatocytes.

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## **PECULIARITIES OF DEVELOPMENT OF THE COLON TOPOGRAPHY AT THE END OF THE FETAL PERIOD OF HUMAN ONTOGENESIS**

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At the current stage of development of abdominal surgery accurate data concerning individual anatomical peculiarities of sizes, shape and location of the colon are essential. A number of issues dealing with causes stipulating development of pathological processes of both the colon and abdominal organs on the whole remain unclear. The size of the colon and its spatial interrelations with adjacent complexes of organs and the abdominal wall influences on the development of its topography. Meanwhile, any disorders of such interrelations can become a morphological precondition promoting formation of developmental defects of this intestinal portion.

A doctor of any specialty facing certain pathological signs of developmental defects in the abdominal organs in children should understand the fact that genesis of an ailment is of congenital character and it requires conceptual ways to correct defects in children.

The research was carried out on 37 specimens of human neonates by means of the methods of macroscopy, thin section under the microscope -10 control, and radiography. Examination of the colon found that its ascending portion was located in the right lateral portion of the abdominal cavity passing from the caecum to the hepatic flexure. In 21 cases it was pressed against the lateral abdominal wall, that is, was located in the lateral position. In 10 cases the ascending portion of the colon was located proximally, that is, it was displaced to the side of the middle line, and in 6 cases it was located in the middle towards the right lateral abdominal wall and the middle line. Practically in all the cases the ascending portion of the colon was located in the mesoperitoneal position. Its length from the ileac fossa to the liver was from 54,5 mm to 78,0 mm.

Examination of the hepatic flexure of the colon detected three main positions towards the inferior border of the liver: 1. On 19 specimens the right flexure of the colon arose from the inferior border of the liver. 2. On 12 specimens it was located under the inferior liver border. 3. In 6 cases the flexure was half covered with the inferior liver border.

The transverse portion of the colon on the material examined was directed from the right to the left and a little distally. Close to the left lateral region of the abdominal cavity it formed left or splenic flexure. The length of the transverse portion of the colon changes within the limits from 118,0 to 200,5 mm. The transverse portion of the colon on the fetal specimens has two main positions: 1. Superior (on 21 specimens) – in its middle part the transverse portion of the colon touched the inferior border of the liver. 2. Inferior (in 16 cases) – the middle portion of the colon deflects to the umbilicus. In the majority of cases the colon is rather mobile and possesses its own mesentery from 24,5 to 43,5 mm long. The inferior border of the spleen is adjacent to the posterior border of the splenic flexure. On the majority of specimens this flexure (24 specimens) arose from under the left liver lobe, and in others (13 cases) – it was covered by this lobe.

Examination of the descending portion of the colon found that it was located in the left lateral side of the abdominal cavity. The descending portion is from 44,5 to 87,5 mm long. In the majority of cases (25 specimens) this portion of the colon similar to the ascending portion is located in the mesoperitoneal position. Meanwhile, in 12 cases the inferior part of the descending portion of the colon had its mesentery. Close to the mesenteric crest the descending portion of the colon passes into the sigmoid one.

Thus, the shape and size of the sigmoid at the end of the fetal period of human ontogenesis are individually variable. Filling of the colon with meconium produces a substantial effect on its position, mobility, diameter and color of this intestinal portion.