

times, $p < 0,05$) and higher frequency of III (4,6 times, $p < 0,05$) OA radiographic stage, higher chance of OA progression from stage I to stage III (OR = 4,88 95 % CI [1,09-21,81, $p < 0,05$]); reliably lower occurrence of mono-osteoarthritis (3,1 times, $p < 0,05$) and higher incidence of poly-osteoarthritis (7,1 times, $p < 0,05$) with an increased chance of involvement of more joints (OR = 7,50 95 % CI [1,71-32,96, $p < 0,05$]), higher intensity of pain syndrome (by WOMAC) (OR = 2,81; 95 % CI [1,28-6,15, $p < 0,05$]), joint stiffness (2,2 times) and a higher chance of its progression (OR = 2,19; 95 % CI [1,04-4,59, $p < 0,05$]), higher exacerbation rate during the year (2,7 times, $p < 0,05$) (OR = 2,63; 95 % CI [1,01-6,81, $p < 0,05$]), a higher incidence of severe OA (OR = 9,75; 95 % CI [1,27-75,05, $p < 0,05$]), lower frequency of first stage FJF (2,3 times, $p < 0,05$) and higher frequency of II and III degrees of FJF (1,5 and 4,4 times, respectively, $p < 0,05$), higher total chance of FJF progression (OR = 4,69; 95 % CI [1,05–21,01, $p < 0,05$]), which progress with the increase in the degree of obesity ($p < 0,05$), the degree of IP ($p < 0,05$) due to a significant imbalance in the metabolism of connective tissue components ($p < 0,05$).

Nazymok Y.V.

FORMATION OF THE SIGMOIDORECTAL SEGMENT INTESTINAL WALL IN THE FETUSES OF THE THIRD TRIMESTER OF INTRAUTERINE DEVELOPMENT

*Department of Disaster and Military Medicine
Bukovinian State Medical University*

The main macroscopic and microscopic signs of the sigmoidorectal segment in fetuses and neonates are considered the following structures: narrowing of the intestinal tube in the point of transition of the sigmoid colon into the rectum; lack of evagination and epiploic appendages within the sigmoidorectal segment; the place of transition of the sigmoid colon strips into the solid longitudinal muscular layer of the rectum; the semicircle available in the form of a fold of the mucous membrane located transversally to the axis of the intestine. Practical value of the above anatomical facts is discussed in the scientific literature (A.E. Bharucha et al., 2007; F. Bretagnol et al., 2006; B.N. Zhukov, 2000). Nevertheless primary (absolute) signs of differentiation between the sigmoid and rectum should be peculiarities of the myo- and angioarchitectonics of the wall of the colon distal portions (P. Kovalsky et al., 2008), which is confirmed by the results of our research.

Objective of the research is to study histotopographic peculiarities of the sigmoidorectal segment in fetuses of the third trimester. The study was conducted on 31 specimens of the 7-9-month fetuses (305,0-420,0 mm of PCL) using a complex of morphological investigation methods. Histological examination of the sigmoidorectal segment wall found that mucous membrane in 7-month fetuses is thicker than in 8-9-month of the intrauterine development. A number of blood vessels are indicative of the vascular plexuses available in the submucous basis within the borders of the sigmoidorectal transition. According to D.W. Fawcett et. al., (1994), submucous plexus is involved into the regulation of the local intestinal secretion, absorption and muscular contraction. The loose fibrous tissue of the submucous basis penetrates partially into the muscular membrane of the initial portion of the peritoneal part of the rectum. The data obtained in our research correlate with the statement suggested by A. Shafik, et. al., (1999) concerning anatomical borders of the sigmoidorectal segment. The muscular layer of the sigmoidorectal segment in 7-month fetuses is more than a half of the wall thickness in comparison with the mucous membrane. But in the term of 8-9 months of the intrauterine development the muscular layer of the sigmoidorectal transition becomes thinner again. In 9-month fetuses certain groups of fibers in the muscular layer are partially interrupted by the layers of the loose fibrous tissue, which is indicative of enlargement of the intestinal diameter that advances the growth of the mucous membrane.

Therefore, histological transformations of the sigmoidorectal segment are indicative of the formation of the sigmoidorectal sphincter: the mucous and submucous membranes of the sigmoidorectal transition look like evagination in the intestinal lumen, the blood vessels form vascular plexuses in the submucous membrane of the sigmoidorectal transition. The circular layer of the muscular membrane in the sigmoidorectal transition is thicker than the longitudinal layer.