

TOPOGRAPHY OF THE OVARIES AND UTERINE TUBES IN FETUSES

ТОПОГРАФІЯ ЯЄЧНИКІВ ТА МАТКОВИХ ТРУБ ПЛОДІВ

Резюме. Використовуючи класичні методи анатомічного дослідження: виготовлення топографо-анатомічних зрізів, просте та тонке препарування під контролем мікроскопа, метод ін'єкції судин з метою їх візуалізації, при наступному препаруванні та фотодокументуванні, було вивчено особливості будови, топографії та морфометричних даних яєчників та маткових труб плодів різних вікових груп плодового періоду.
Ключові слова: внутрішні жіночі статеві органи, плід, людина.

While studying a seven-month old fetus of the female sex a rare variant of the topography of the internal genital organs and the blood vessels of the pelvis has been detected. The specific characteristics of the form and syntopy of the ovaries, uterine tubes have been described, the morphometric parameters of the common, external and internal iliac arteries have been presented. A research of the consistent patterns of the forming of the structure and topography of a fetus is of great importance for understanding the mechanisms of the form-building of organs. An investigation of the consistent patterns of the organization of the structure and topography of a fetus has an important value for understanding the mechanisms of the normal and pathological form building of organs [1-4].

Objective. Study peculiarities of variants of perinatal anatomy of the internal female genital organs, its topography and perinatal morphogenesis.

Material and methods. The study was carried out on 50 human fetuses aged 4-10 months – measuring 250.0-500.0 mm of the parietococcygeal length (PCL). The material was fixed in a 7% formol solution during a fort night upon which the specific characteristics of the external structure of the internal female genital organs and their syntopy were studied, employing the method of thin sectioning under the control of a binocular magnifier and morphometry.

Results. Uncommon variants of the external structure of the ovaries, as well as their forms, sizes, topography have been detected in fetuses, measuring 112.0; 117.0; 125.0 and 270.0 mm of the parietococcygeal length (PCL). The right ovary in the fetus, measuring 112.0 mm PCL consists of three lobes: the uterine, two intermediate and tubal. The names of the lobes are determined on the topographic principle, namely: the uterine lobe forms the uterine extremity of the ovary, the tubal one-the tubal extremity of the ovary, while the lobes located between the latter are called intermediate. The right ovary of an elongated form is located in the abdominal cavity obliquely. The uterine tube adjoins the lateral surface of the ovary, the rectum being located more medially. The total length of the ovary is 7.2 mm, whereas its separate lobes – 3.3 mm, 2 mm and 2.5 mm respectively, the width – 2.5 mm, the thickness – 2 mm. The proper ligament of the ovary, 3.8 mm in length, is attached to the iliac fascia above

the opening into the pelvis minor, the ovarian artery and vein being located in its thickness. The length of the mesovarium is 4 mm, the width – 1 mm. The right uterine tube, 9 mm in length, has a twisting passage without a clear-cut delimitation into portions, it is covered with the serous membrane on all sides.

The left ovary of an elongated flattened form is located in the abdominal cavity slantwise. The overall length of the ovary is 7 mm, the width – 2,2 mm, the thickness – 2 mm. The proper ligament of the ovary, 1,5 mm in length is attached to the right border of the uterus below the uterine tube. The suspensory ligament of the ovary – 4 mm long is attached to the iliac fascia above the aperture of the small pelvis and the ovarian artery and vein are located in its thickness. The length of the mesovarian is 4 mm, the width is 1 mm. the left uterine tube, 9 mm in length has a tortuous passage without a clear-cut demarcation into parts, being covered by the serous membrane on all sides.

The right ovary is located in the abdominal cavity in a fetus of 117.0 mm PCL, horizontally obliquely, i.e. the longitudinal axis of the organ is directed from the level of the middle of the inguinal ligament to the promontory. The ovary is of an elongated oval form, they distinguish anteromedial, posterolateral and inferior surfaces, the superior rounded, anterior and posterior sharpened margins, the uterine and tubal rounded ends. The superior margin and the anteriomedian surface are adjoined by the loops of the ileum, the posterolateral surface is adjoined by the muscles psoas major, external iliac vessels, the obturator nerve, the ureter. It is adjacent to the uterine tube by the inferior surface. The uterine end of the ovary is located over the fundus of the uterus and abuts with its apex on the anterior surface of the rectum and in front it is closely adjacent to the body of the urinary bladder. The length of the ovary is 6 mm, the width is 3 mm, the thickness is 2 mm. The length of the proper ligament – 2 mm. The right uterine tube is 6.5 mm, no legible borders are identified between its lobes.

The left ovary is located in the abdominal cavity horizontally the longitudinal axis of the organ passes in the frontal plane. The ovary is of an elongated bean – shaped form, the anterior and posterior surface, the superior convex

and sharpened margin, the inferior one is somewhat rounded and concave, the uterine sharpened margin and the tubal rounded one are differentiated. It should be noted that a recess is detected along the passage of the inferior concave margin into which the flexure of the uterine tube goes in. The loops of the ileum abut on the anterior surface of the ovary, whereas the external iliac vessels, the obturator nerve the ureter adjoin the posterior surface. The inferior margin of the ovary is contiguous with the isthmus of the uterine tube, the ampulla is located at a distance of 1.5 mm downwards from the ovary, the infundibulum in the form of a hook abut on the tubal end of the ovary, being adjacent to the rectum: while in front to the body of the urinary bladder. The peculiar feature lies in the fact that the uterine end of the right ovary is located behind over the fundus of the uterus of the uterine end of the left ovary. Both uterine ends tightly adjoin one another. The fundus and the body of the uterus are located in the cavity of the large pelvis. The thickness of the uterus at the level of the fundus is 1 mm, the distance between the uterine tubes is 3 mm. The length of the proper ligament of the ovary is 2 mm, the suspensory one is 2 mm. The length of the ovary is 6 mm, the width is 2.5 mm, the thickness is 2 mm. The length of the mesentery is 4 mm, the fimbriae of the infundibula of the uterine tubes are not identified.

In a fetus – 270.0 mm of PCL the right ovary was composed of three lobes: the uterine, intermediate, tubal, whereas the left one of two lobules: the uterine and tubal.

The right ovary is trihedral, approximated to an oval form located slantwise in the abdominal cavity. The anterior, posterior and lateral surfaces, the anterior, posterior and medial margins, the pointed uterine and tubal ends are differentiated in the ovary. The loops of the ileum are adjacent to the anterior surface of the ovary, whereas the ureter, the internal ileal artery and vein are adjacent to the tubal end. The length of the ovary is 18.5 mm, while its separate parts – 8 mm, 4 mm, 6 mm respectively the width – 7 mm and the thickness – 4 mm. the proper ligament of the ovary, 3 mm in length is attached to the lateral margin of the uterus below the uterine tube. The suspensory ligament 5.5 mm long, is

attached to the iliac fascia, the ovarian artery and vein being located in its thickness. The length of the mesovarium is 10.5 mm, the width is 3 mm.

The left ovary is of an elongated, shape approximated to an oval form, it is located in the abdominal cavity horizontally. They differentiate the superior, inferior and anterior surfaces, the superior, inferior and posterior margins, the pointed uterine and the rounded tubal ends in the ovary. The anterior surface of the ovary is adjoined by the anterior loop of the sigmoid colon, while the ureter abuts on its posterior margin. The uterine end of the ovary is adjacent to the posterior surface of the tubal isthmus, whereas the tubal one- to the external ileal artery and vein. The length of the ovary is 17 mm, its separate parts measuring 10 mm and 7 mm respectively the width is 6.5 mm, the thickness- 3.4 mm. the proper ligament of the ovary, 3 mm long is attached to the left margin of the uterus beneath the uterine tube. The suspensory ligament of the ovary, 5.5 mm long, is attached to the iliac fascia and contains the ovarian vessels. The length of the mesovarium is 10 mm the width is 2.5 mm.

The right uterine tube has an S-shaped form and is located horizontally. The total length of the right uterine tube is 32 mm, whereas its separate parts: the isthmus – 6 mm, the ampulla – 16 mm, the infundibulum of the uterine tube abuts on the anterior surface of the muscles psoas major and the external iliac vessels.

The left uterine tube has a twisting character and is located horizontally. The total length of the left uterine tube is 28 mm, whereas its separate parts: the isthmus – 4 mm, the ampulla – 16 mm, the infundibulum – 5 mm and the uterine part – 3 mm. the infundibulum of the uterine tube abuts on the external iliac vessels.

Conclusion: At the beginning of the fetal period of the development of the internal female genital organs a marked variability of the form and location of the ovaries, the uterine tubes, their mesenteries and ligaments is identified. The organization of their syntopy is in a correlation with the development of the rectum, urinary bladder and the pelvic structures.

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ТОПОГРАФИЯ ЯИЧНИКОВ И МАТОЧНЫХ ТРУБ ПЛОДОВ

Резюме. При исследовании плодов женского пола обнаружено редкие варианты топографии внутренних половых органов и кровеносных сосудов таза. Описаны особенности формы и синтопии яичников, маточных труб, приведены морфометрические параметры общей, внешней и внутренней подвздошных артерий.

Ключевые слова: яичники, маточные трубы, плод, человек.

TOPOGRAPHY OF THE OVARIES AND UTERINE TUBES IN FETUSES

Abstract. While studying female old fetuses certain variant of the topography of the internal organs and blood vessels of the pelvis were detected, namely: an form and syntopy of the ovaries, uterine tubes, diameter distinctions of the common, external, internal iliac arteries.

Key words: ovary, uterus, uterine tube, fetus, human.

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