

Anatomy of The Urinary Organs

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Phylogeny and ontogeny of the urinary tract and genitals. Generality and function of the structure of the urinary organs. Kidney development, function and structure. Kidney segments. The morpho-functional unit of the kidney is the nephron. Syntopy, skeletotopy, location of the kidney relative to the peritoneum. Curtains surrounding the kidney. Kidney fixation. Hosiotes in the renal portal. Urinary organs. Small and large cups of kidney. Kidney jam. Urinary tract: parts, topography, location relative to the peritoneum, wall structure, narrowed areas. Development, shape, structure, location of the bladder relative to the peritoneum. Male and female urinary tract. X-ray imaging of urinary organs. (A 1,2,3,40: 1,2) The urinary organ is called urinaria. These include the kidneys, urinary tract, bladder, and urinary tract. The renal Ren is located in the posterior wall of the abdominal cavity in the area of the XII thoracic spine, 1 and 2 lumbar spine, in the region umbilicalis, regio epigastrica, region abdominalis. It is a glandular organ. The right kidney is 1-1.5 cm lower than the left kidney. The boundaries of the kidneys in relation to the skeleton are in a diurnal line passing from the upper end of the left kidney to the thoracic vertebrae XI and Hil chi, and the lower end III - between the lumbar vertebrae. The Yukon end of the right kidney is in the area of the diurnal line passing through the middle of the body of the thoracic spine XII. The length of the kidney in adults is 10-12 cm, width 5-6 cm, thickness dsm. It weighs from 120g to 200g. The shape is similar to a bean. Pre-flattened to the back. In it the Yukon and lower extremities exterimitas superior, exterimitas inferior inner and outer margins margo medialis, margo lateralis, anterior and posterior surfaces facies anterior, facies posterior. The surfaces of the kidney, its outer kigogi and ends are convex and smooth on the outside, but the middle line and the slightly protruding inner kirg og botik. From this subcutaneous site, arteries and nerves enter the kidney, and venous mines exit. Urinary incontinence. That is why this deep place is called the kidney gate. If the veins and nerves are removed, a sinus renalis is formed. The kidneys of a newborn baby are not yet fully formed, often facing the back. The adrenal gland is in front of the first lumbar spine in adults, and slightly lower in young infants. Kopka is formed at the age of 15 and takes the place of the face. If we look at the middle of the kidney in two coats, we can expect that it is made up of two different substances. The outer layer of the kidney skin, called sortex tenis, is reddish in color and about 4-5 mm thick, and the innermost substance is called the medulla renalis. Because the brain substance is arranged in a pyramidal shape, they are called the pyramids of the kidneys - pyramidas renalis (malpighii). If the base of the pyramid collapses, the person will perish. If both urinary tracts of dogs are burned, they will die within 30 to 48 hours. Toxins that are formed in the human body are excreted only by the kidneys. Other organs are the skin's respiratory organs, the intestines are auxiliary. 1 liter of ore enters the kidneys in 1 minute, -1500 liters of ore per day. The pressure in the renal vessels is much higher (100 mm), and in the outflow vessels it is 70 mm. All of these processes occur in nephrons in the kidney that are close to 1 min. The average length of urine from the kidneys is 25-28 cm. As urine moves peristally through the urinary tract, this movement begins in the renal pelvis. The urinary tract is a bubble, in the form of an enlarged tube, which has a ductile shape. The size of the bubble in new babies is 50 cm, the cube is 3 cm. In a 3-year-old child - 180 cm. kubga teng. The cavity not only acts as a urine collector, but also as a urine collector. That is why it is well developed, consisting of 4 floors. The abdominal press muscles are also actively involved in expelling urine from the bladder. The sex difference in the structure of the urethra is sharply differentiated. In males it is much longer (18cm) and consists of 3 parts, in females it is much larger (3-4cm) and is straight. These differences are of great practical importance. Anatomy of the urinary tract During the development of the urinary cistern, it is difficult to see the following deficiencies, excesses and malformations. This additional kidney consists of two permanent kidneys, the mucosa, the submucosa, the muscle, and the adventitia. The renal pelvis gradually replaces the single-layered epithelium with a multi-layered variable epithelium. Development of the urinary organs In mammals, the urinary organs improve over three evolutionary periods.

1. In a very small (primary) embryo, the first kidney pronephros appears.
2. Later, this primary renal umbilicus is occupied by the primary kidney (or wolf body) mesonephros.
3. Then permanent renal metanephros appears.

When the embryo is five to six inches long, the indifferent gland in the base of the Wall's body becomes the testicle or ovary: When the indifferent gland begins to testicle, epithelial cells begin to form when the embryo is one week old. Children's kidneys are in the form of Yumatok. Their faces are sad. that is. Faces are flattened at the age of two to three. The kidney is 4,297 in length and weighs 12g. Weight at 1 year old is 30 - 359 15 years old is 225 250g, 40 years old is 275Z10g. Functional anatomy of the urinary tract, We talked about the functional anatomy of the digestive and respiratory organs in a previous report. We have learned that nutrients are necessary for human life, and that the process of absorption of nutrients takes place in the cells. To the body in the process of living in cells and tissues

insoluble wastes are formed, the salts of which are excreted with the help of sweat glands and urinary organs. Waste (urea and the like) is excreted from the bladder (inside the bowl). When the bladder is very full, it can rise to the navel.

There are three parts to the bladder:

1. The lower part (towards the bottom) is much wider, and the base of the bladder is called the fundus vesicae.
2. The upper side goes to the ureter and ends with the ureteric orifice.
3. Between these two parts is the corpus vesicae.

In addition, the bladder has a set of folds. In women, the uterus above the bladder is bent, so there is no tip of the bladder, and the surface is flat and slightly flattened. The wall of the bladder consists of four layers.

1. The mucous layer is the tunica mucosa, which covers the inner surface of the bladder. When the (bladder) bladder is filled with the urinary wall, the folds disappear as the wall expands.
2. The submucosa is composed of connective tissue, which plays an important role in the formation of folds of the mucous membrane.
3. Middle layer - stratum intermedium is a mixture of connective and fibrous fibers
4. Serous layer outer layer.

Urine, which is continuously produced in the kidneys, is excreted into the external environment. The urinary tract includes the renal pelvis and ducts, the urethra, the bladder, and the external urinary tract. The renal pelvis and ureter are similar to the general structure of the urethra and bladder, in which the four membranes can be distinguished: (linea terminalis) is divided into these parts. The urine that enters the bladder cavity is directed to the bottom of the bladder cavity, pierces its wall, and opens into the cavity (cavity). The part of the urethra that passes through this bladder wall is sometimes called the urethral intermuscularis. The urinary tract narrows slightly from the abdominal cavity to the pelvis at the beginning and at the entrance to the bladder. The urinary tract of women is 23 cm shorter than that of males, and the topographic relationship with the organs of the pelvic cavity is slightly different. In females, it enters the space between the vagina along the free entrance of the ovary, along with the bladder, and is poured into the bladder from the part closest to the bottom of the bladder. In males, the pelvis is located outside the seminal vesicle, from where it enters the bladder wall. The wall of the urinary tract consists of three layers. The innermost mucous layer is the tunica mucosa. There are mucous glands, the second layer is the muscular layer, and the outer layer is the connective tissue - the tunica adventitia. The urinary bladder - urinaria, which comes from 500 to 700 ml of average heat, is located in the small pelvic cavity, between the bladder and the rectum. Its size is human body weight 1/1000. The urinary bladder in men and women's bladder differ from each other in appearance, each of which changes its shape depending on the condition. If there is no urine in the cavity, it penetrates deep into the pelvic cavity. In this case, the bladder itself is slightly flattened. In this case, behind it are the female uterus and the uterus, and in men the seminal vesicles and the last part of the seminal vesicles. But when the bladder is filled with urine, its shape changes and its attitude towards the organs changes. In this case (the peritoneal wall) takes the form of a hollow egg. The order of placement changes. There are many pyramids relative to the ureters. The pyramids are made up of a large number of tubes. The tubular substance of the kidney also penetrates the base of the pyramids and is called the renal column or papillary - columnae renalis. The upper surface of the kidney of a newborn baby is divided into several kidneys. If both substances of the kidney are examined under a microscope, it can be expected that it is composed of very small tubes. Anatomy for Students, Drake RL Valley, Mitchell AWM Elsevier Churchill Livingstone, 2014. The last part of the ring will be sunk inwards. The result is a double-walled capsule at the end of each tube, like a funnel. This capsule is called Bowman's capsule or Bowman's capsule - capsula glomerularis. There is a space between the two walls of the capsule, which is connected to the common head of the tube. The capillaries of the afferent arteriole enter the open side of this capsule (vas afferens) and form a ball-shaped glomerulus. Through the thin walls of these capillaries that touch the capsule, the blood in the deposit is pushed into the capsule space, and the expected deposit of liquid comes out of the capsule (vas efferens). The tubular substance is brown in this ball of the ball, the tube from the ball capsule to the center of the kidney is called the tubulus renalis. When the tube enters the pyramid, the tube is twisted. The tubule forms a renal pelvis and a calyx (renal pelvis), which returns to the posterior cavity. This part of the pars distalis tubuli nephroni, which takes the form of a second torsion tube, is called the connecting tube tubulus conjunctivus. This last tube takes a few such connecting tubes and is again directed from the inside of the pyramid towards the ureter. Hence, the tubular substance of the kidney consists only of the ureters. Therefore, it consists of a reading color. The tubular substance of the kidney is added, and when it grows up, it is characterized by 15-20 broader tubular ducts papillaris. These ducts open at the end of the ureter. The Bowman's capsule, the primary torsion tube, and the secondary torsion tube together form a structural and functional unit, and it is called the nephron. Each kidney consists of about one million such nephrons. Urine coming through the ureter, through the holes in the tip of the callus, is

called the calyces renalis minoris. There are 8 to 9 such cups, each containing one, two, sometimes three sliders. The small cups join together to form the calyce renalis majoris. Typically, the large cups are two, and their fusion results in the formation of the renal pelvis-pelvis renalis. Jörn is located between the veins and continues from the renal portal to the ureter with the urethra. The place where the urine passes from the renal pelvis to the bladder is called the urinary tract. The reed, which is 30 cm long and Bem wide, is pre-stretched to the back with the moon tal standing outside the peritoneum. Depending on the location of the urinary tract, the abdomen is divided into the pelvic renalis and the pelvis. The line delimiting the fold and the small pelvis is located at the base of one or between the two kidneys, in front of the body of the vertebrae. Sometimes, instead of two springs, only one kidney can be formed. Usually, the permanent kidneys appear much lower (in the pelvic area, and the sung goes to its permanent place. Their lower ends are visible to each other. This joint is also called the glass kidney because of its reminiscent of the taka form. Occurs as a result of a lack of bone growth and misalignment. This is sometimes called a closed anterior wall of the urethra. leaving it open without closing at the bottom is a common occurrence.

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