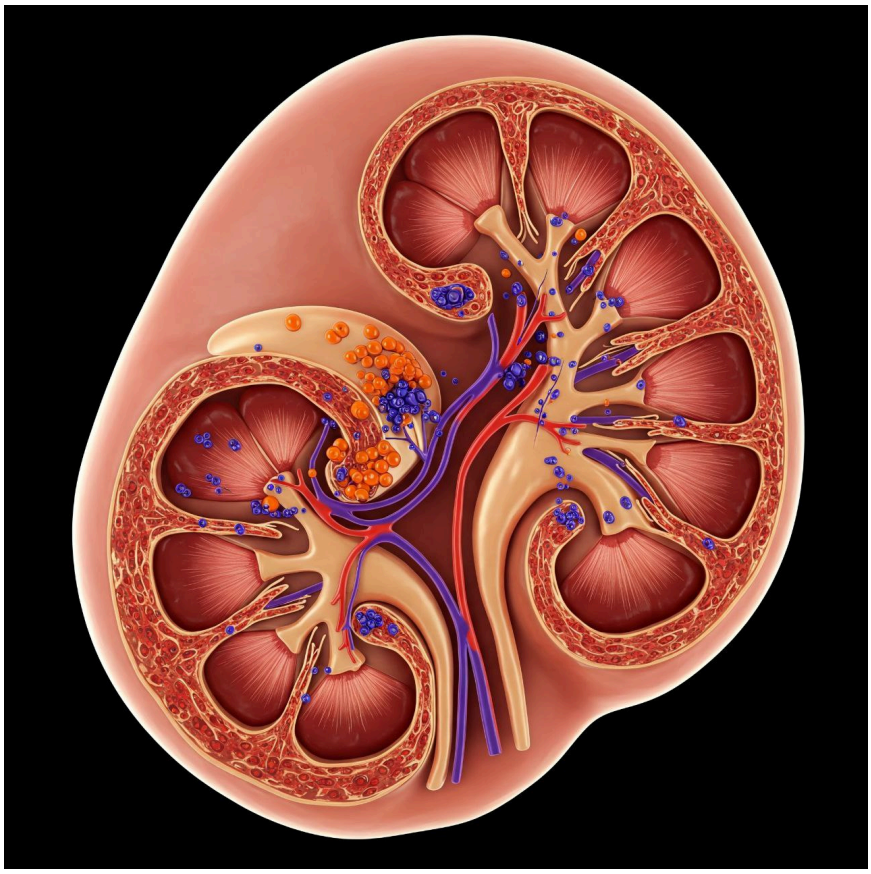

Written by: Dr. Ali Fahad Abu Jamil.
Questions for embryology.

🧠Which embryonic structure gives rise to the permanent kidneys (metanephros)?

- Urogenital sinus
- Pronephros
- Mesonephros
- Metanephric mesenchyme and ureteric bud
  Answer: Metanephric mesenchyme and ureteric bud

🧠What is the fate of the mesonephric (Wolffian) duct in males?

- It degenerates completely
- It forms the uterus
- It contributes to the male reproductive system
- It forms the urinary bladder
  Answer: It contributes to the male reproductive system

🧠Which structure forms the ureter, renal pelvis, calyces, and collecting ducts?

- Pronephros

- Metanephric blastema
- Ureteric bud
- Cloaca
  Answer: Ureteric bud

🧠The nephron (including proximal tubule and loop of Henle) arises from:

- Ureteric bud
- Mesonephric duct
- Metanephric mesenchyme
- Allantois
  Answer: Metanephric mesenchyme

🧠Failure of the ureteric bud to interact with metanephric mesenchyme leads to:

- Horseshoe kidney
- Renal agenesis
- Duplex kidney
- Polycystic kidney
  Answer: Renal agenesis

🧠The trigone of the bladder is derived from:

- Allantois
- Cloaca
- Ureteric bud
- Mesonephric ducts
  Answer: Mesonephric ducts

🧠The earliest kidney structure to appear during development is the:

- Metanephros
- Pronephros
- Mesonephros
- Cloaca
  Answer: Pronephros

🧠The cloaca divides into the urogenital sinus and rectum by the:

- Allantois
- Ureteric bud
- Urorectal septum
- Mesonephric duct
  Answer: Urorectal septum

🧠Which stage of kidney development is functional for a short time during fetal life?

- Pronephros
- Mesonephros
- Metanephros
- All of them
  Answer: Mesonephros

🧠What prevents ascent of a horseshoe kidney?

- Absent ureteric bud
- Failure of nephron formation
- Inferior mesenteric artery
- Urachus persistence
  Answer: Inferior mesenteric artery

🧠A newborn presents with an absent kidney on ultrasound. What is the most likely embryologic cause?

- Persistent cloaca
- Early degeneration of pronephros
- Failure of ureteric bud to form
- Abnormal descent of kidney
  Answer: Failure of ureteric bud to form

🧠A child is found to have two ureters draining a single kidney. What is the embryological explanation?

- Abnormal ascent of kidneys
- Fusion of metanephric blastema

- Duplication of ureteric bud
- Failure of urorectal septum
  Answer: Duplication of ureteric bud

🧠A patient with recurrent urinary tract infections is found to have a malformed trigone. Which embryological structure is likely involved?

- Ureteric bud
- Allantois
- Mesonephric duct
- Metanephric mesenchyme
  Answer: Mesonephric duct

🧠Which embryonic structure gives rise to the pronephric duct?

- Cloaca
- Aorta
- Intermediate mesoderm
- Nephrotomes
  Answer: Nephrotomes

🧠Which part of the mesonephric tubule becomes invaginated by blood vessels to form a renal corpuscle?

- Lateral end
- Medial end
- Cloacal end
- Ureteric end
  Answer: Medial end

🧠The mesonephric duct contributes to which of the following in males?

- Uterine tubes
- Gartner’s duct
- Vas deferens
- Labia majora
  Answer: Vas deferens

🧠What is the origin of the ureteric bud?

- From the aorta
- From the pronephric duct
- From the mesonephric duct near the cloaca
- From the metanephric cap
  Answer: From the mesonephric duct near the cloaca

🧠Which of the following structures are derived from the ureteric bud?

- Renal corpuscle
- Nephron
- Loop of Henle
- Collecting tubules
  Answer: Collecting tubules

🧠Which embryological structure forms the nephron?

- Ureteric bud
- Cloaca
- Metanephric mesenchyme
- Wolffian duct
  Answer: Metanephric mesenchyme

🧠What causes the fetal kidney to appear lobulated?

- Presence of calyces
- Segmented growth of nephrotomes
- Separation of metanephric tissue lobes
- Unfused collecting ducts
  Answer: Separation of metanephric tissue lobes

🧠The hilum of the kidney rotates medially due to:

- Migration of ureteric bud
- Fusion of nephrotomes
- Ascent of the kidney

- Enlargement of adrenal gland
  Answer: Ascent of the kidney

🧠The final blood supply to the adult kidney is from:

- Median sacral artery
- Umbilical artery
- Common iliac artery
- Abdominal aorta
  Answer: Abdominal aorta

🧠Which stage of kidney development gives rise to functional nephrons?

- Pronephros
- Mesonephros
- Metanephros
- Cloaca
  Answer: Metanephros

🧠A newborn has bilateral renal agenesis. Which embryologic event most likely failed?

- Formation of mesonephric tubules
- Development of pronephros
- Interaction between ureteric bud and metanephric mesenchyme
- Rotation of the hilum
  Answer: Interaction between ureteric bud and metanephric mesenchyme

🧠 male patient has absence of vas deferens. Which embryologic structure failed to develop properly?

- Mesonephric tubules
- Paramesonephric duct
- Mesonephric duct
- Ureteric bud
  Answer: Mesonephric duct

🧠 neonate is diagnosed with duplicated ureter. What is the embryological cause?

- Failure of kidney ascent

- Duplication of the ureteric bud
- Abnormal fusion of metanephric caps
- Persistent pronephros
  Answer: Duplication of the ureteric bud

🧠 Failure of the ureteric bud to induce the metanephric cap results in:

- Polycystic kidney
- Renal agenesis
- Bifid ureter
- Horseshoe kidney
  Answer: Renal agenesis

🧠 Which congenital anomaly involves multiple cysts in the collecting ducts?

- Renal agenesis
- Congenital polycystic kidney
- Ectopic kidney
- Horseshoe kidney
  Answer: Congenital polycystic kidney

🧠 Ectopic kidney remains in the pelvis due to failure of:

- Ureteric bud formation
- Ascending movement
- Renal capsule development
- Ureter elongation
  Answer: Ascending movement

🧠 Fusion of the lower poles of the kidneys results in:

- Bifid ureter
- Polycystic kidney
- Horseshoe kidney
- Renal agenesis
  Answer: Horseshoe kidney

🧠 Which artery prevents the ascent of horseshoe kidney?

- Renal artery
- Inferior mesenteric artery
- Aortic arch
- Common iliac artery
  Answer: Inferior mesenteric artery

🧠 An accessory renal artery most commonly enters the kidney at:

- Renal pelvis
- Ureteropelvic junction
- Upper or lower pole
- Renal sinus
  Answer: Upper or lower pole

🧠 Bifid ureter occurs due to:

- Failure of metanephric cap
- Fusion of ureters
- Early bifurcation of ureteric bud
- Late regression of mesonephric duct
  Answer: Early bifurcation of ureteric bud

🧠 Double ureter is caused by:

- Ureteric bud duplication before reaching metanephric cap
- Late degeneration of pronephros
- Absence of renal capsule
- Ectopic kidney rotation
  Answer: Ureteric bud duplication before reaching metanephric cap

🧠 In congenital polycystic kidney, the cysts originate from:

- Proximal tubules
- Loop of Henle
- Collecting ducts

- Bowman’s capsule
  Answer: Collecting ducts

🧠 Which condition is associated with a risk of hydronephrosis due to aberrant blood vessel compression?

- Renal agenesis
- Polycystic kidney
- Accessory renal artery
- Ectopic kidney
  Answer: Accessory renal artery

🧠 A newborn is diagnosed with bilateral renal agenesis. Which of the following is a likely finding on prenatal ultrasound?

- Polyhydramnios
- Oligohydramnios
- Horseshoe kidney
- Normal amniotic fluid
  Answer: Oligohydramnios

  🧠 A child presents with recurrent urinary tract infections and is found to have a duplicated collecting system on imaging. What is the most likely embryologic cause?

- Failure of kidney rotation
- Duplication of ureteric bud
- Failure of glomerular development
- Delayed nephron maturation
  Answer: Duplication of ureteric bud

🧠 An adult patient has an incidental finding of a horseshoe kidney. What is the most likely complication if any?

- Early renal failure
- Ectopic urethral opening
- Obstruction due to inferior mesenteric artery
- Complete renal agenesis
  Answer: Obstruction due to inferior mesenteric artery

🧠 The trigone of the bladder is derived from:

- Endoderm of hindgut
- Splanchnic mesoderm
- Mesonephric ducts
- Ureteric bud
  Answer: Mesonephric ducts

🧠 The urogenital sinus gives rise to all of the following EXCEPT:

- Urinary bladder
- Urethra
- Rectum
- Prostatic urethra
  Answer: Rectum

🧠 Which of the following structures is a remnant of the allantois?

- Trigone
- Median umbilical ligament
- Ureter
- Prostate
  Answer: Median umbilical ligament

🧠 Which part of the cloaca gives rise to the rectum?

- Ventral part
- Anal membrane
- Dorsal part (anorectal canal)
- Urogenital sinus
  Answer: Dorsal part (anorectal canal)

🧠 The perineal body is derived from:

- Urogenital membrane
- Cloacal membrane
- Urorectal septum

- Allantois
  Answer: Urorectal septum

🧠 Failure of the anterior abdominal wall to develop properly results in:

- Epispadias only
- Exstrophy of bladder
- Urachal sinus
- Rectourethral fistula
  Answer: Exstrophy of bladder

🧠 Which embryonic structure contributes to the muscular wall of the urinary bladder:

- Parietal mesoderm
- Endoderm of cloaca
- Splanchnic mesoderm
- Mesonephric duct
  Answer: Splanchnic mesoderm

🧠 The definitive urogenital sinus is divided into:

- Rectal and anal parts
- Cranial and caudal vesicle
- Pelvic and phallic parts
- Prostatic and membranous urethra only
  Answer: Pelvic and phallic parts

🧠 What happens to the urachus after birth?

- Becomes the ureter
- Remains as a patent fistula
- Forms the median umbilical ligament
- Forms the bladder apex
  Answer: Forms the median umbilical ligament

🧠 Which part of the urogenital system is lined by endoderm and derived from the cloaca?

- Trigone

- Ureter
- Renal pelvis
- Bladder
  Answer: Bladder

🧠 A newborn has continuous leakage of urine from the umbilicus. Which condition is most likely?

- Urachal cyst
- Urachal fistula
- Patent vitelline duct
- Bladder exstrophy
  Answer: Urachal fistula

🧠 male infant is found to have a malformed penis with an open urethral groove on the dorsal aspect and visible bladder mucosa. The most likely diagnosis is:

- Hypospadias
- Urachal cyst
- Epispadias with bladder exstrophy
- Posterior urethral valves
  Answer: Epispadias with bladder exstrophy

🧠 CT scan of the pelvis reveals a midline fluid-filled structure between the bladder and umbilicus. The lesion does not communicate with either. What is the most likely diagnosis?

- Patent urachus
- Urachal cyst
- Urachal sinus
- Bladder diverticulum
  Answer: Urachal cyst

🧠 Which part of the male urethra is derived from ectoderm?

- Membranous urethra
- Penile urethra
- Terminal part in the glans penis

- Prostatic urethra
  Answer: Terminal part in the glans penis

🧠 The membranous urethra in males develops from:

- Phallic part of urogenital sinus
- Vesico-urethral part
- Pelvic part of urogenital sinus
- Glandular ectoderm
  Answer: Pelvic part of urogenital sinus

🧠 Which part of the prostatic urethra has a mesodermal origin?

- Supracollicular dorsal wall
- Infracollicular part
- Penile urethra
- Navicular fossa
  Answer: Supracollicular dorsal wall

🧠 The glandular plate that forms the navicular fossa originates from:

- Endoderm
- Mesoderm
- Ectoderm
- Neural crest
  Answer: Ectoderm

🧠 The phallic part of the urogenital sinus contributes to all of the following EXCEPT:

- Penile urethra
- Lower 2/3 of the vagina
- Navicular fossa
- Vestibule of the vagina
  Answer: Navicular fossa

🧠 Which part of the urethra is formed from urethral folds?

- Membranous urethra

- Prostatic urethra
- Spongy urethra (penile)
- Ureter
  Answer: Spongy urethra (penile)

🧠 The trigone of the bladder is derived from:

- Vesico-urethral part
- Endoderm of hindgut
- Mesonephric ducts
- Phallic part
  Answer: Mesonephric ducts

🧠 The female urethra develops from which of the following?

- Phallic part
- Pelvic part
- Vesico-urethral canal
- Urethral folds
  Answer: Vesico-urethral canal

🧠 Which structure develops from the pelvic part of the urogenital sinus in males?

- Urinary bladder
- Membranous urethra
- Glans penis
- Supracollicular part of urethra
  Answer: Membranous urethra

🧠 Which of the following is a derivative of the vesico-urethral part in females?

- Entire vagina
- Trigone of bladder
- Urethra (except dorsal wall)
- Labia minora
  Answer: Urethra (except dorsal wall)

🧠 A male newborn has a blind-ending urethra with failure of urine passage. Imaging shows absence of the navicular fossa. What is the most likely embryological defect?

- Failure of urethral folds fusion
- Failure of ectodermal ingrowth
- Agenesis of mesonephric duct
- Defective pelvic part of urogenital sinus
  Answer: Failure of ectodermal ingrowth

🧠 A newborn girl has complete absence of the urethral opening. Which embryological structure most likely failed to develop properly?

- Vesico-urethral canal
- Phallic part
- Allantois
- Mesonephric duct
  Answer: Vesico-urethral canal

🧠 A male patient has a dorsal opening of the urethra at the base of the penis. This is consistent with:

- Hypospadias
- Epispadias
- Patent urachus
- Urethral fistula
  Answer: Epispadias

🧠 What is the embryological origin of the gonadal ridge?

– Ectoderm

– Endoderm

– Intermediate mesoderm

– Paraxial mesoderm

Answer: Intermediate mesoderm

🧠 What is the main gene responsible for testis differentiation?

– WNT4

– SOX9

– SRY

– DAX1

Answer: SRY

🧠 Which structure gives rise to the ovarian follicles?

– Medulla of the gonad

– Cortex of the gonad

– Mesonephros

– Wolffian duct

Answer: Cortex of the gonad

🧠 What hormone is produced by Sertoli cells to inhibit Müllerian duct development?

– Testosterone

– Dihydrotestosterone

– Müllerian Inhibiting Substance (MIS)

– Estrogen

Answer: Müllerian Inhibiting Substance (MIS)

🧠 In the absence of the SRY gene, the indifferent gonad develops into:

– Testis

– Ovary

– Adrenal gland

– Epididymis

Answer: Ovary

🧠 Primordial germ cells migrate from the yolk sac to the gonadal ridge during which week?

– Week 2

– Week 4–6

– Week 8

– Week 10–12

Answer: Week 4–6

🧠 Which of the following cells produce testosterone in the testis?

– Sertoli cells

– Leydig cells

– Theca cells

– Granulosa cells

Answer: Leydig cells

🧠 What happens to the medulla of the indifferent gonad in females?

– Becomes the testis cords

– Forms the ovarian follicles

– Degenerates

– Becomes the uterus

Answer: Degenerates

🧠 Which duct system develops in males under the influence of testosterone?

– Müllerian duct

– Wolffian duct

– Cloacal duct

– Paramesonephric duct

Answer: Wolffian duct

🧠 A mutation in the SRY gene will most likely result in:

– Normal male development

– Ovarian tumor

– Female phenotype with XY genotype

– Testicular cancer

Answer: Female phenotype with XY genotype

🧠 A newborn with XY karyotype has ambiguous genitalia and undescended testes. Lab tests show low MIS. What is the likely diagnosis?

– Androgen insensitivity syndrome

– 5-alpha reductase deficiency

– SRY gene mutation

– Sertoli cell dysfunction

Answer: Sertoli cell dysfunction

🧠 A child with XX genotype presents with male external genitalia. What is the most likely explanation?

– SRY translocation to X chromosome

– Aromatase deficiency

– Turner’s syndrome

– Testicular feminization

Answer: SRY translocation to X chromosome

🧠 An individual with normal male external genitalia is found to have a uterus during surgery. What is the most probable cause?

– Leydig cell hypoplasia

– Persistent Müllerian duct syndrome

– Androgen insensitivity syndrome

– Congenital adrenal hyperplasia

Answer: Persistent Müllerian duct syndrome

🧠 Which embryological structure contributes to the formation of the genital ridge?

– Cloacal membrane

– Coelomic epithelium

– Endodermal lining

– Neural crest

Answer: Coelomic epitheli

🧠 What is the origin of primordial germ cells?

– Surface ectoderm

– Intermediate mesoderm

– Endoderm of the yolk sac

– Neural tube

Answer: Endoderm of the yolk sac

🧠 Through which structure do the primordial germ cells migrate to reach the genital ridge?

– Ventral mesentery

– Dorsal mesentery

– Umbilical cord

– Mesonephric duct

Answer: Dorsal mesentery

🧠 What is the name of the longitudinal structure formed by proliferating coelomic epithelium on either side of the aorta?

– Mesonephros

– Genital ridge

– Mullerian duct

– Urogenital sinus

Answer: Genital ridge

🧠 Primary sex cords develop from which of the following?

– Invagination of the cloaca

– Epithelial projections into the genital ridge

– Regression of mesonephros

– Fusion of the Müllerian ducts

Answer: Epithelial projections into the genital ridge

🧠 At which week is the gonad still considered “indifferent”?

– Week 3

– Week 5

– Week 6–7

– Week 10

Answer: Week 6–7

🧠 Which of the following separates the primary sex cords from one another?

– Migration of primordial germ cells

– Invasion of mesenchyme

– Regression of coelomic epithelium

– Development of Müllerian ducts

Answer: Invasion of mesenchyme

🧠 Which component is mesodermal in origin during gonadal development?

– Primordial germ cells

– Coelomic epithelium

– Yolk sac wall

– Allantois

Answer: Coelomic epithelium

🧠 Which statement best describes the role of the coelomic epithelium in gonadal development?

– Produces hormones for early gonad function

– Forms the genital ridge by proliferating into the coelomic cavity

– Creates the Müllerian duct

– Becomes the mesonephros

Answer: Forms the genital ridge by proliferating into the coelomic cavity

🧠 What defines the end of the indifferent stage of gonad development?

– Arrival of germ cells to the yolk sac

– Development of coelomic epithelium

– Appearance of primary sex cords

– Differentiation into testis or ovary

Answer: Differentiation into testis or ovary

🧠 A newborn is found to have underdeveloped gonads and a mutation that impairs migration of primordial germ cells. Which embryological process is likely disrupted?

– Coelomic epithelium proliferation

– Development of mesonephros

– Germ cell migration from yolk sac

– Testis cord formation

Answer: Germ cell migration from yolk sac

🧠 fetus has an XY genotype, but the genital ridge fails to form. What is the most likely result?

– Overproduction of testosterone

– Development of ovaries

– Absence of functional gonads

– Formation of Mullerian ducts

Answer: Absence of functional gonads

🧠 defect in dorsal mesentery formation may lead to abnormal development of the gonads due to:

– Failed mesonephric duct formation

– Abnormal Müllerian duct regression

– Inability of germ cells to reach genital ridge

– Malformation of coelomic epithelium

Answer: Inability of germ cells to reach genital ridge

🧠 What structure is formed when primary sex cords elongate in the testis?

– Rete testis

– Tunica albuginea

– Testis cords

– Mesonephric tubules

Answer: Testis cords

🧠 Which cell type is responsible for the secretion of Müllerian Inhibitory Factor (MIF)?

– Leydig cells

– Spermatogonia

– Sertoli cells

– Theca cells

Answer: Sertoli cells

🧠 What is the embryological origin of Leydig cells?

– Endoderm of yolk sac

– Surface ectoderm

– Coelomic epithelium

– Subjacent mesenchyme

Answer: Subjacent mesenchyme

🧠 What is the final fate of the distal part of the processus vaginalis?

– Obliterated

– Forms the tunica vaginalis

– Becomes gubernaculum

– Becomes mesorchium

Answer: Forms the tunica vaginalis

🧠 Which of the following helps testicular descent by acting as a guide structure?

– Rete testis

– Mesorchium

– Gubernaculum

– Processus vaginalis

Answer: Gubernaculum

🧠 At what month does the testis pass through the inguinal canal?

– 4th month

– 6th month

– 8th month

– 10th month

Answer: 8th month

🧠 Failure of the proximal part of processus vaginalis to close can result in:

– Testicular torsion

– Cryptorchidism

– Inguinal hernia

– Hydrocele of spermatic cord

Answer: Inguinal hernia

🧠 Which anomaly involves testis being located at the root of the penis?

– Cryptorchidism

– Inguinal hernia

– Ectopic testis

– Hydrocele

Answer: Ectopic testis

🧠 Testicular artery originates from:

– Renal artery

– External iliac artery

– Abdominal aorta

– Inferior mesenteric artery

Answer: Abdominal aorta

🧠 What is the function of the mesorchium?

– Guides descent

– Anchors testis in pelvis

– Site for vessels entry/exit

– Secretes testosterone

Answer: Site for vessels entry/exit

🧠 newborn has an undescended testis located in the iliac fossa. What is the most likely diagnosis?

– Ectopic testis

– Cryptorchidism

– Inguinal hernia

– Hydrocele

Answer: Cryptorchidism

🧠 boy has a swelling in the scrotum containing clear fluid, and imaging shows a patent processus vaginalis without bowel herniation. Diagnosis?

– Hydrocele

– Inguinal hernia

– Ectopic testis

– Testicular torsion

Answer: Hydrocele

🧠 During surgery for inguinal hernia, the testis is found in the upper thigh outside the scrotum. What is the condition?

– Cryptorchidism

– Hydrocele

– Ectopic testis

– Varicocele

Answer: Ectopic testis

🧠 What structure gives rise to the medulla of the ovary?

– Primary cortical cords

– Fibromuscular stroma replacing medullary cords

– Tunica albuginea

– Mesovarium

Answer: Fibromuscular stroma replacing medullary cords

🧠 Which of the following forms the cortical sex cords?

– Medullary cords

– Second generation from coelomic epithelium

– Mesonephric tubules

– Leydig cells

Answer: Second generation from coelomic epithelium

🧠 At what intrauterine week do primary oocytes enter meiosis I?

– 8th week

– 10th week

– 12th week

– 20th week

Answer: 12th week

🧠 What is the origin of the tunica albuginea in the ovary?

– Medullary cords

– Cortical cords

– Subjacent mesenchyme

– Primordial germ cells

Answer: Subjacent mesenchyme

🧠 Which ligament connects the ovary to the uterus?

– Round ligament

– Suspensory ligament

– Ligament of the ovary

– Mesovarium

Answer: Ligament of the ovary

🧠 What forms the round ligament of the uterus?

– Suspensory ligament

– Cranial mesentery

– Caudal gubernaculum

– Mesorchium

Answer: Caudal gubernaculum

🧠 Which embryological structure persists as the canal of Nuck in females?

– Mesonephric duct

– Paramesonephric duct

– Processus vaginalis

– Cloacal membrane

Answer: Processus vaginalis

🧠 What structure carries blood vessels to and from the ovary?

– Mesorchium

– Mesovarium

– Gubernaculum

– Round ligament

Answer: Mesovarium

🧠 Where is the ovary located at the 3rd month of development?

– Lesser pelvis

– Greater pelvis

– Inguinal canal

– Labium majora

Answer: Greater pelvis

🧠 What causes congenital inguinal hernia in female infants?

– Malformed uterus

– Persistent canal of Nuck

– Excess estrogen

– Failure of cortical cord development

Answer: Persistent canal of Nuck

🧠 A 4-month-old girl presents with bilateral swelling in the labia majora. What is the most likely cause?

– Inguinal hernia

– Hydrocele

– Persistent canal of Nuck

– Ovarian cyst

Answer: Persistent canal of Nuck

🧠 During laparoscopy, an ovary is found herniated into the inguinal canal. What is the likely developmental error?

– Early descent

– Ovarian agenesis

– Failure of gubernaculum attachment to uterus

– Excess androgen exposure

Answer: Failure of gubernaculum attachment to uterus

🧠 female newborn is diagnosed with absence of both ovaries. What is the term for this condition?

– Hypogonadism

– Ovarian agenesis

– Turner syndrome

– Cryptorchidism

Answer: Ovarian agenesis

🧠Which genital duct develops into the uterus and fallopian tubes in females?

– Mesonephric duct

– Urogenital sinus

– Paramesonephric duct

– Cloacal duct

Answer: Paramesonephric duct

🧠In males, which hormone causes regression of the paramesonephric ducts?

– Testosterone

– Estrogen

– Anti-Müllerian Factor (AMF)

– Dihydrotestosterone (DHT)

Answer: Anti-Müllerian Factor (AMF)

🧠What does the fused caudal end of the paramesonephric ducts form in females?

– Fallopian tubes

– Uterus and upper vagina

– Cervix

– Labia majora

Answer: Uterus and upper vagina

🧠Which part of the vagina is mesodermal in origin?

– Entire vagina

– Lower 2/5

– Upper 3/5

– Vaginal vestibule

Answer: Upper 3/5

🧠Which remnant of the paramesonephric duct persists in males?

– Vas deferens

– Uterus masculinus (prostatic utricle)

– Epididymis

– Seminal vesicle

Answer: Uterus masculinus (prostatic utricle)

🧠Which structure forms the broad ligament of the uterus?

– Gubernaculum

– Folded mesonephric ducts

– Transverse peritoneal folds dragged by Müllerian ducts

– Vaginal plate

Answer: Transverse peritoneal folds dragged by Müllerian ducts

🧠What gives rise to the vaginal plate in females?

– Mesonephric duct

– Müllerian tubercle

– Gubernaculum

– Mesovarium

Answer: Müllerian tubercle

🧠The appendix of the testis in males is a remnant of which embryological structure?

– Urogenital sinus

– Mesonephric duct

– Paramesonephric duct

– Genital tubercle

Answer: Paramesonephric duct

🧠 midline septum divides the vagina into two parts. What is the diagnosis?

– Imperforate hymen

– Septate vagina

– Uterus bicornis

– Vaginal agenesis

Answer: Septate vagina

🧠What embryological failure leads to imperforate hymen?

– Failure of vaginal plate to descend

– Failure of canalization of vaginal plate

– Failure of Müllerian duct fusion

– Persistence of mesonephric ducts

Answer: Failure of canalization of vaginal plate

🧠 teenage girl presents with primary amenorrhea and cyclic pelvic pain. Physical exam shows a bulging hymen. What is the most likely diagnosis?

– Vaginal atresia

– Imperforate hymen

– Septate uterus

– Ovarian cyst

Answer: Imperforate hymen

🧠 20-year-old woman has two cervices on pelvic exam and MRI shows a uterus divided into two horns. What is the diagnosis?

– Uterus bicornis bicollis

– Septate uterus

– Uterus unicornis

– Uterus didelphys

Answer: Uterus bicornis bicollis

🧠 newborn girl has stool leakage from the vaginal opening. What is the likely cause?

– Imperforate anus

– Congenital rectovaginal fistula

– Cloacal membrane persistence

– Urogenital sinus agenesis

Answer: Congenital rectovaginal fistula

🧠 Which structure forms the clitoris in females?

– Genital swellings

– Urethral folds

– Genital tubercle

– Urogenital sinus

Answer: Genital tubercle

🧠 The labia majora are derived from:

– Urethral folds

– Genital tubercle

– Labio-scrotal swellings

– Vaginal plate

Answer: Labio-scrotal swellings

🧠 Which hormone is responsible for male external genitalia differentiation?

– Estrogen

– Dihydrotestosterone

– Testosterone

– Anti-Müllerian hormone

Answer: Testosterone

🧠 The penile urethra is formed by fusion of:

– Genital swellings

– Urethral folds

– Genital tubercle

– Mesonephric ducts

Answer: Urethral folds

🧠 Which congenital anomaly is due to failure of urethral fold fusion?

– Hypospadias

– Epispadias

– Imperforate anus

– Urethral duplication

Answer: Hypospadias

🧠 In females, the labia minora develop from:

– Genital swellings

– Urethral folds

– Genital tubercle

– Urogenital membrane

Answer: Urethral folds

🧠 The corpus spongiosum of the penis develops from:

– Genital tubercle mesenchyme

– Urethral folds mesenchyme

– Labio-scrotal swellings

– Urogenital sinus

Answer: Urethral folds mesenchyme

🧠 In males, what structure forms from the genital swellings?

– Prepuce

– Scrotum

– Testis

– Urethra

Answer: Scrotum

🧠 Epispadias is typically associated with:

– Bladder exstrophy

– Testicular agenesis

– Cryptorchidism

– Rectovaginal fistula

Answer: Bladder exstrophy

🧠 What is the origin of the vaginal vestibule?

– Mesonephric ducts

– Genital tubercle

– Definitive urogenital sinus

– Müllerian ducts

Answer: Definitive urogenital sinus

🧠 newborn male has the urethral opening on the underside of the penis. What is the most likely diagnosis?

– Epispadias

– Hypospadias

– Normal variant

– Phimosis

Answer: Hypospadias

🧠 child is born with the bladder exposed on the abdominal wall and the urethra opens dorsally. What is this condition?

– Hypospadias

– Epispadias with bladder exstrophy

– Posterior urethral valve

– Urethral fistula

Answer: Epispadias with bladder exstrophy

🧠 newborn female has two separate genital swellings and a small midline structure that becomes erect on stimulation. What is the likely structure?

– Labia minora

– Labia majora

– Clitoris

– Prepuce

Answer: Clitoris

I am the first doctor in neurosurgery, Ali Fahd abujamil.