Anatomy of the Urogenital System

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THE KIDNEY
Location & Surface Projection

- On the posterior abdominal wall
- Retroperitoneal
- Opposite T12-L3
- Occupying epigastric, hypochondriac, lumbar and umbilical regions
Distances from midline

- Right kidney: 2.5 cm (T12), 5 cm (L1), 7.5 cm (L2, L3), 5 cm (L1), 2.5 cm (L1)
- Left kidney: 2.5 cm (T12), 5 cm (L1), 7.5 cm (L2, L3), 5 cm (L1), 2.5 cm (L1)
External features

BORDERS AND SURFACES

HILUM
Anterior Relations

- Suprarenal area
- Hepatic area
- Duodenal area
- Colic area
- Jejunal area

- Suprarenal area
- Gastric area
- Splenic area
- Pancreatic area
- Colic area
- Jejunal area
Ribs and Kidneys
Posterior relations

Relation to ribs and Lateral border of Psoas Major
Capsules
Capsules contd...
Macroscopic structure
Blood supply

Renal artery - branch of abdominal aorta
Blood supply of ureter

- From renal artery
- From gonadal artery
- From aorta
- From common iliac artery
- From internal iliac artery
- From superior vesical artery
- From uterine artery (♀)
- From middle rectal artery
- From vaginal artery (♀)
- From inferior vesical artery (♂)
Lymphatic Drainage

Right Kidney:
• Paracaval
• Inter-aorto caval lymph nodes

Left Kidney:
• Exclusively into Para-aortic lymph nodes

URETERS:
• Renal hilar
• Abdominal paraaortic
• Paracaval
• Common iliac
• Internal iliac
• External iliac
Urinary Bladder
Location
Relation of apex to pubic bone
Urachus and Median Umbilical Ligament
Urachal abnormalities

A. Patent urachus

B. Umbilical polyp

C. Bladder diverticulum

D. Urachal cyst
External features

As seen from the side

As seen from the base
Relations
Blood supply

- Superior and inferior vesical arteries

Support from:
- Obturator
- Inferior gluteal
- Uterine and vaginal in female
Lymphatic drainage

- **Chiefly drain into:**
  External iliac lymph nodes

- **Few vessels drain into:**
  Internal iliac lymph nodes
Prostate
Location
Location
External features and relations
Capsules

- Rectal fascia
- Ejaculatory duct
- Rectal wall
- True capsule
- Prostatic venous plexus
- False capsule
- Posterior lobe
- Median/middle lobe
- Anterior lobe
- Prostatic urethra
- Urogenital diaphragm
Lymphatic drainage
The Testes
Location
External features

- Head of epididymis
- Ductus deferens
- Upper pole
- Appendix of testis
- Body of epididymis
- Sinus of epididymis
- Anterior border
- Lateral surface
- Posterior border
- Lower pole
- Tail of epididymis
Internal structure

Transverse section of the left testis and its surrounding structures to show the coverings of the testis.
Epididymis and vas deferens

- Efferent ductules
- Tunica albuginea
- Fibrous septa
- Seminiferous tubules
- Lobules of epididymis
- Ductus deferens
- Rete testis
- Duct of epididymis
- Mediastinum testis
Blood Supply
Lymphatics

- Testicular artery
- Pampiniform plexus (anterior group)
- Epididymis
- Testis

- Lymph vessels of testis
- Vas deferens
- Artery of vas deferens
- Pampiniform plexus (posterior group)
Lymphatic Drainage

Pre-aortic
Para-aortic \{ Lymph nodes

Testis
THANK YOU