ANPH 252:

Urinary pathology Congenital

Congenital Anatomic Conditions

- Ectopic Kidney
- Horseshoe Kidney
- Duplication
- Ureterocele
- Posterior Urethral Valves
- Renal Agenesis

Ectopic Kidney

- Out of its normal position
- May be in the thorax or pelvis
- Usually has normal function
- <u>Crossed Ectopy</u>
  - Ectopic kidney on the same side
  - Often fused to the other kidney



Case courtesy of Dr Mohammad Osama Yonso, Radiopaedia.org, rID: 16269

Horseshoe Kidney

- Fusion of the kidneys during fetal development
- Kidneys are malrotated
- The two lower poles are fused by renc parenchyma or connective tissue
- The ureters come off of the kidney anteriorly rather than medially
- Does not usually affect function of the kidneys, however the position of the kidneys may have changed

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Fig. 6-9 - Eisenberg

Duplication

- Double renal pelvis with or without double ureters
- Common anomaly, often asymptomatic
- Complications that can arise are increased risk of infection or obstruction
- Can also lead to Vesicoureteral reflux
- No treatment required, unless obstruction occurs. Then stents and antibiotics need to be used


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Fig. 6-11 - Eisenberg

Ureterocele

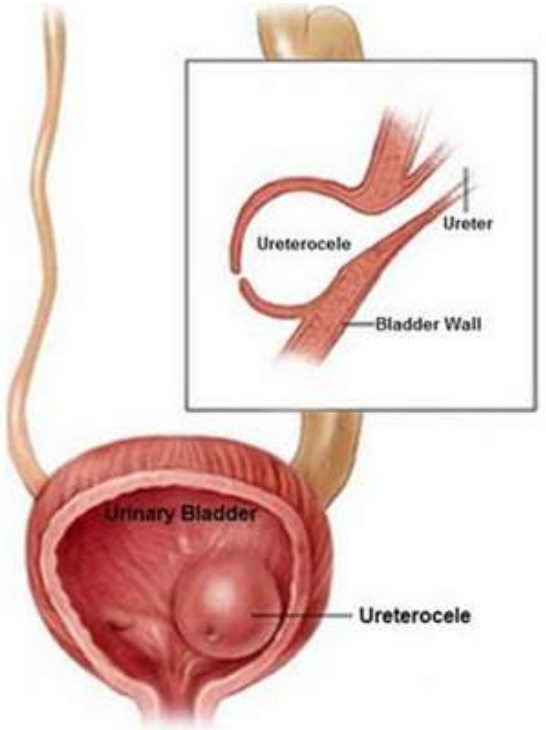
- Cystic dilation of a ureter near its insertion into the bladder (distal ureter)
- The ureter prolapses into the bladder
- "Cobra head" radiographic appearance with contrast
- Common in Children
- Treatment includes endoscopic incision or surgical resection



Ureterocele

Can lead to the following:

- VUR
- Hydronephrosis
- Infection
- Obstruction



Title	What is a Ureterocele
Author	Urology Care Foundation
Link	https://www.urologyhealth.org/urologic-conditions/ureterocele

Posterior Urethral Valves

- Found almost exclusively in males
- Urethral valves impede urine outflow
- Prevents antegrade (forward) flow
- Surgery must be done to prevent further damage
- Can lead to hydronephrosis, hydroureter and renal damage



Fig. 6-14 - Eisenberg

Renal Agenesis

- Absence of one kidney with a single functioning kidney
- Caused by failure of unilateral embryonic renal bud to form
- Hypertrophy of the single kidney occurs as it performs the function of 2 kidneys



Other developmental conditions

Supernumerary kidney

- Third kidney with normal function
- Causes complications such as infection and often require surgical removal

Hypoplastic kidney

- A small version of a normal kidney
- Functional, with normal parenchyma and collecting system

THANKS