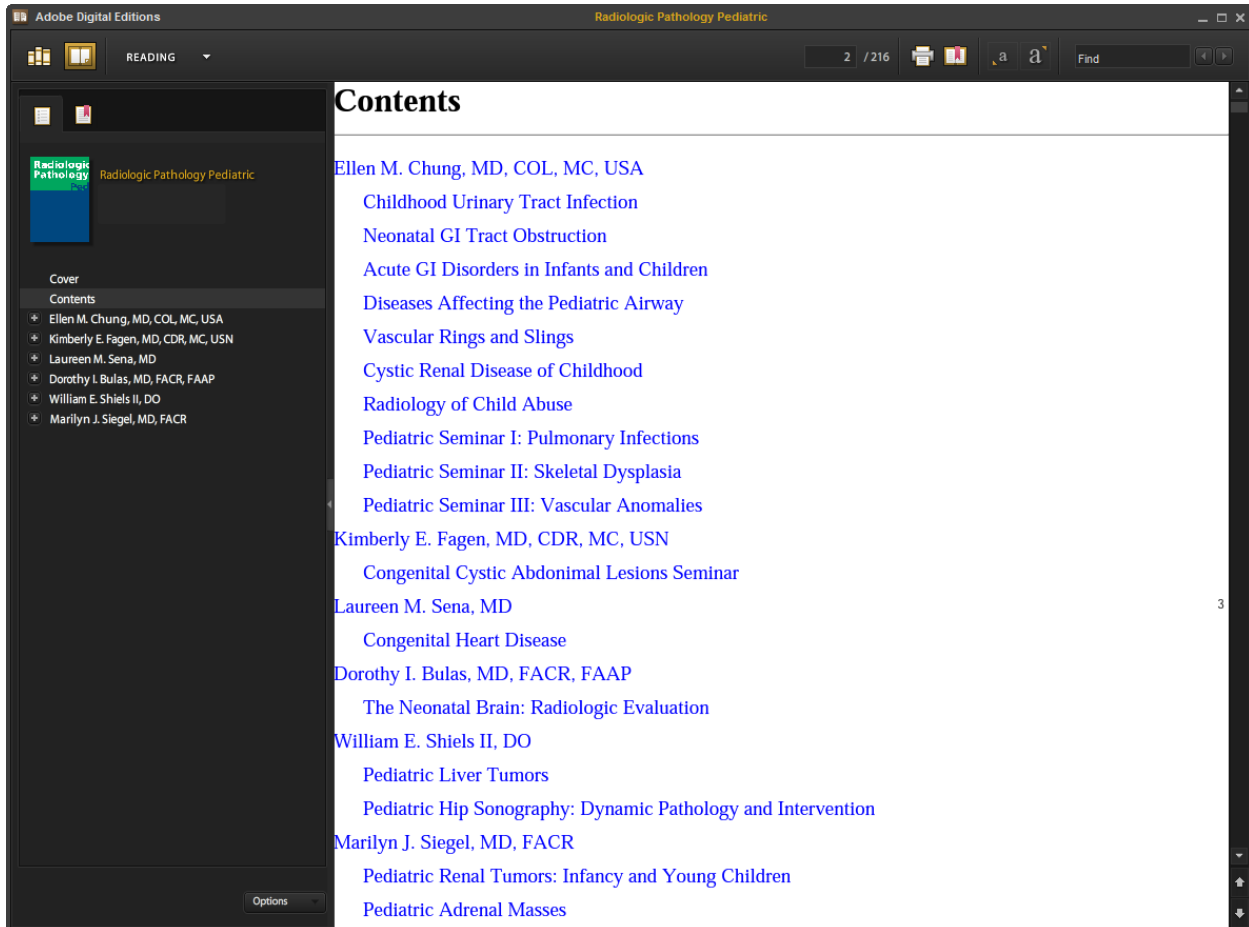
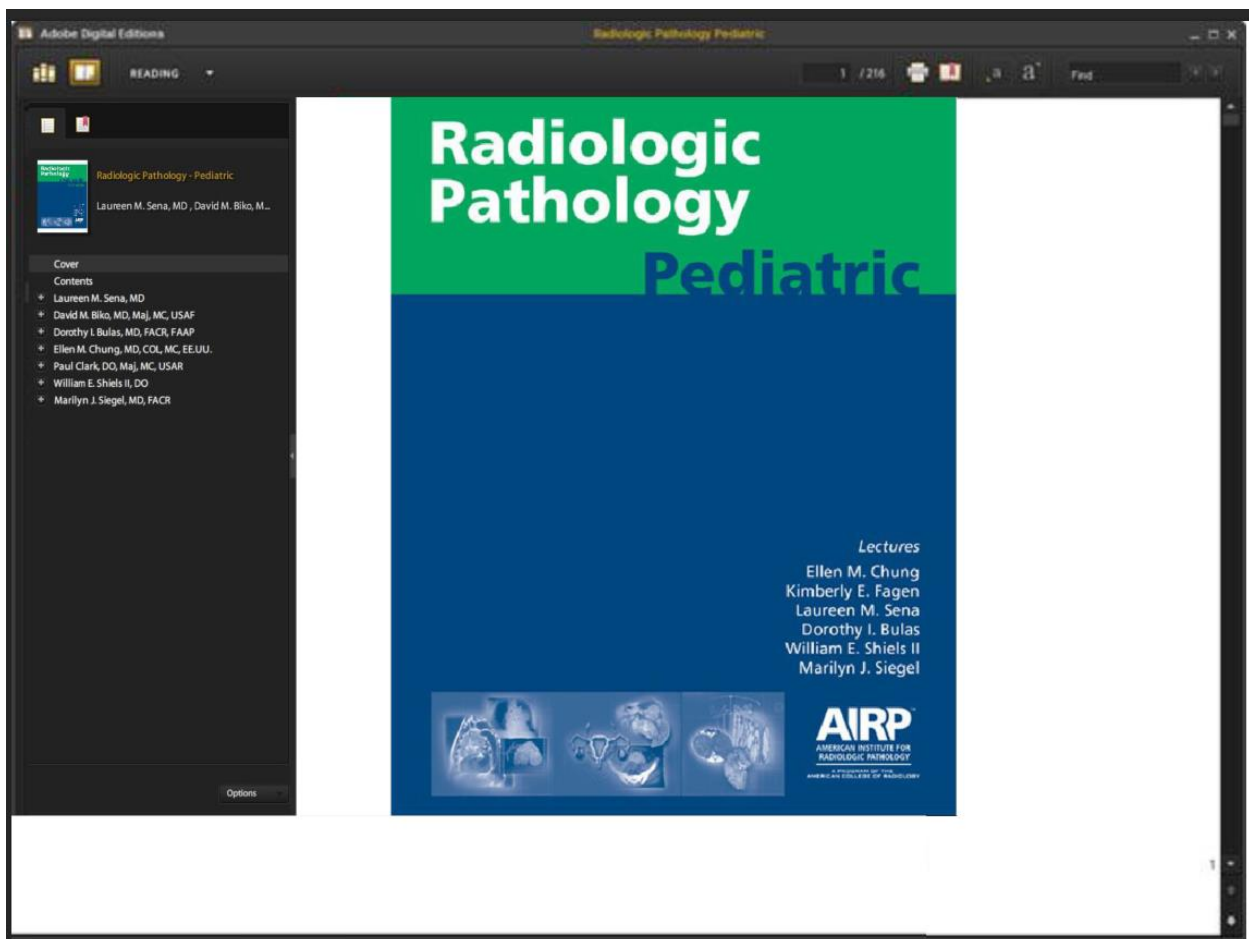




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Figure 8 A, B & C

This male demonstrates the commonly associated ipsilateral seminal vesicle cyst.

Renal Ectopia and Fusion

Figures 9 & 10

- Most common ectopia is pelvic
- Most common fusion is horseshoe
- Anomalous kidneys often small, dysmorphic, and malrotated
- Increased risk of trauma, stones, infection, renovascular hypertension, and possibly tumors

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Figure 9

This autopsy specimen of a fetus demonstrating fusion of the lower poles of the kidneys. Note the abnormal axis of both kidneys.

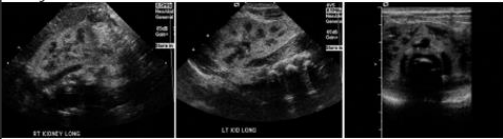


Figure 10 A, B & C

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Acute Pyelonephritis: Clinical

- Infants usually present with fever, but may present with nonspecific symptoms
- Older children present with fever, flank pain but may call it abdominal pain
- If straight-forward clinical picture, no imaging needed in acute setting

Acute Pyelonephritis: Pathology

- Gross pathology – full thickness, loss of C–M differentiation, enlargement, sharp demarcation, and urothelial thickening
- Histology – tubulointerstitial nephritis

Pathologic Features

Figure 40

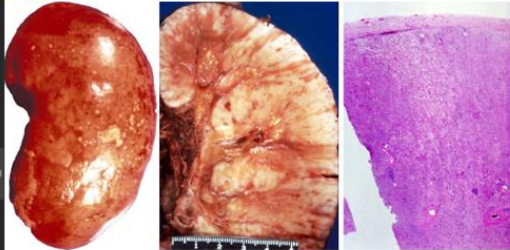


Figure 40 A, B & C

Grossly, the surface of the involved parenchyma is pale compared to the surrounding normal parenchyma. Note the sharp demarcation between normal and abnormal. There is a patchy or lobar distribution. The disease may be focal, multifocal or bilateral. On the cut specimen, the infection involves a full-thickness wedge from the papilla to the surface of the kidney. The tissue is expanded. There is disruption of the corticomedullary differentiation. Note the striated appearance. Note the difference compared to the normal upper pole. On histologic examination there is tubulointerstitial nephritis with extensive neutrophilic infiltration of tubules and interstitium with scattered small colonies of bacteria.

Acute Pyelonephritis: Imaging

Figures 41 to 44

- If fails to respond to therapy, obstruction suspected, or for immunocompromised host, US versus CT
- CT/US/Nuclear medicine – triangular, peripheral focus of decreased flow, decreased cortico-medullary differentiation
- Diffuse or focal enlargement – can appear mass-like
- VCUG indicated – may perform while hospitalized

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Figure 28 A & B



CT urogram shows the upper pole ureter of the right duplex kidney inserting into the vagina.

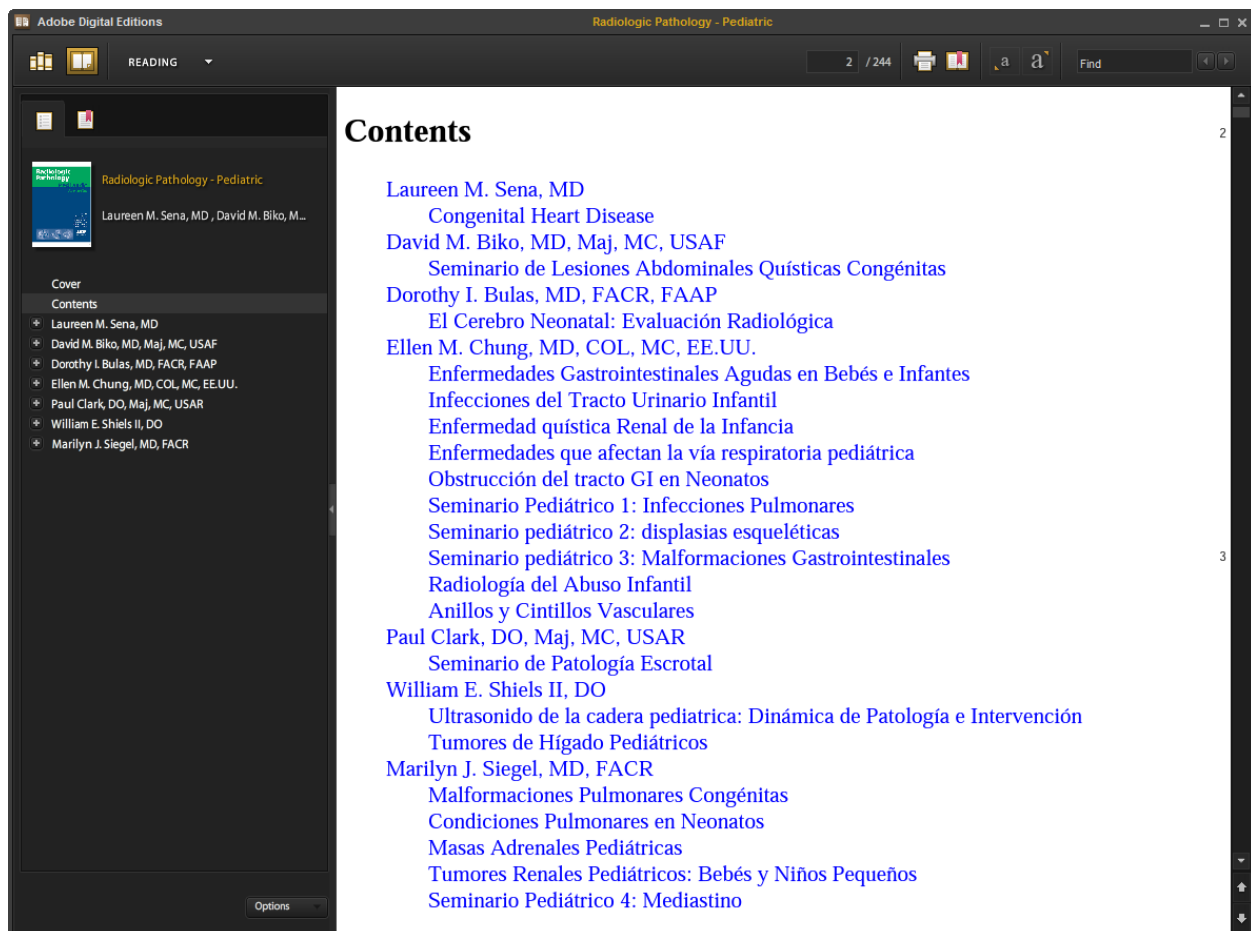
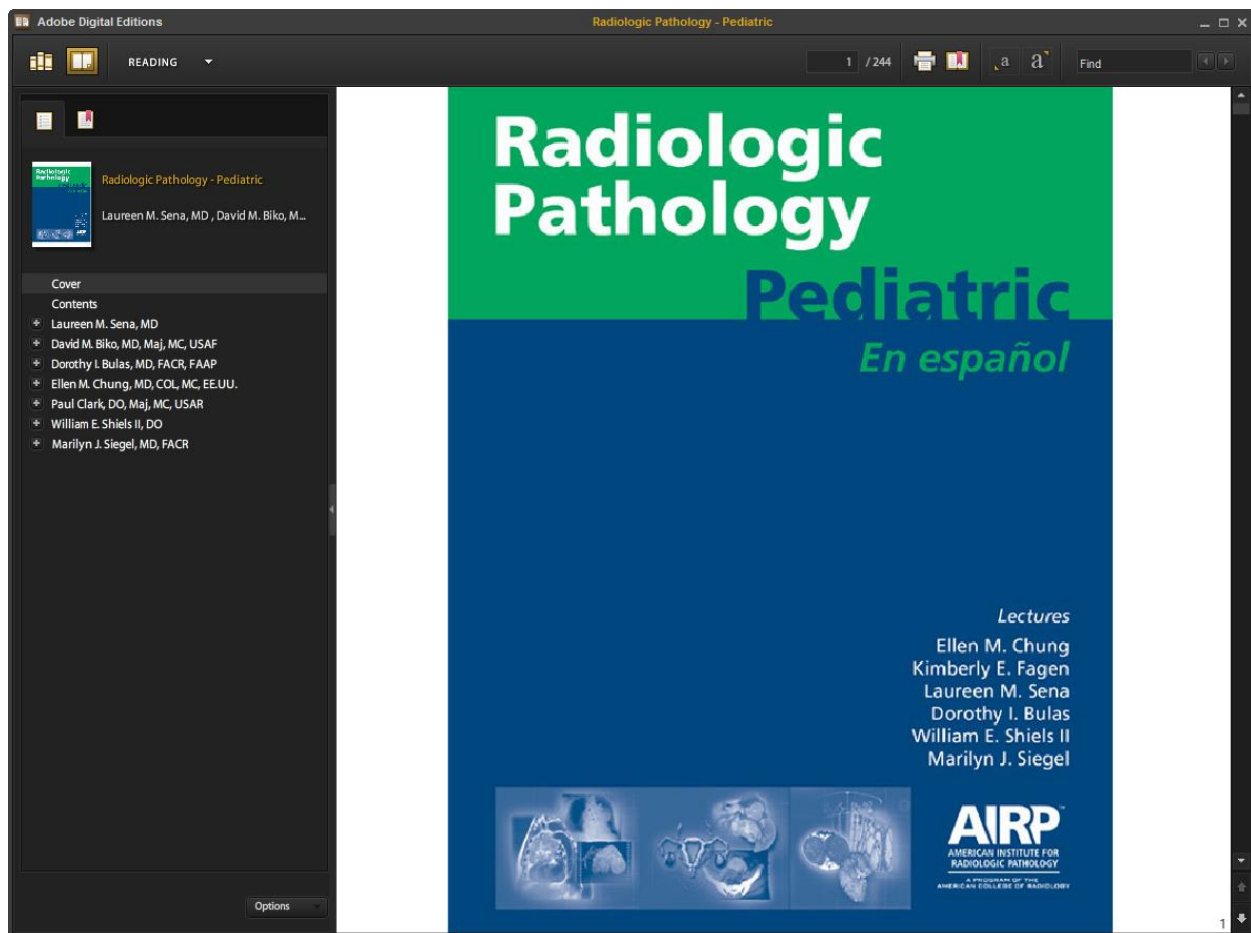
What to Look for in Addition to Vesicoureteral Reflux

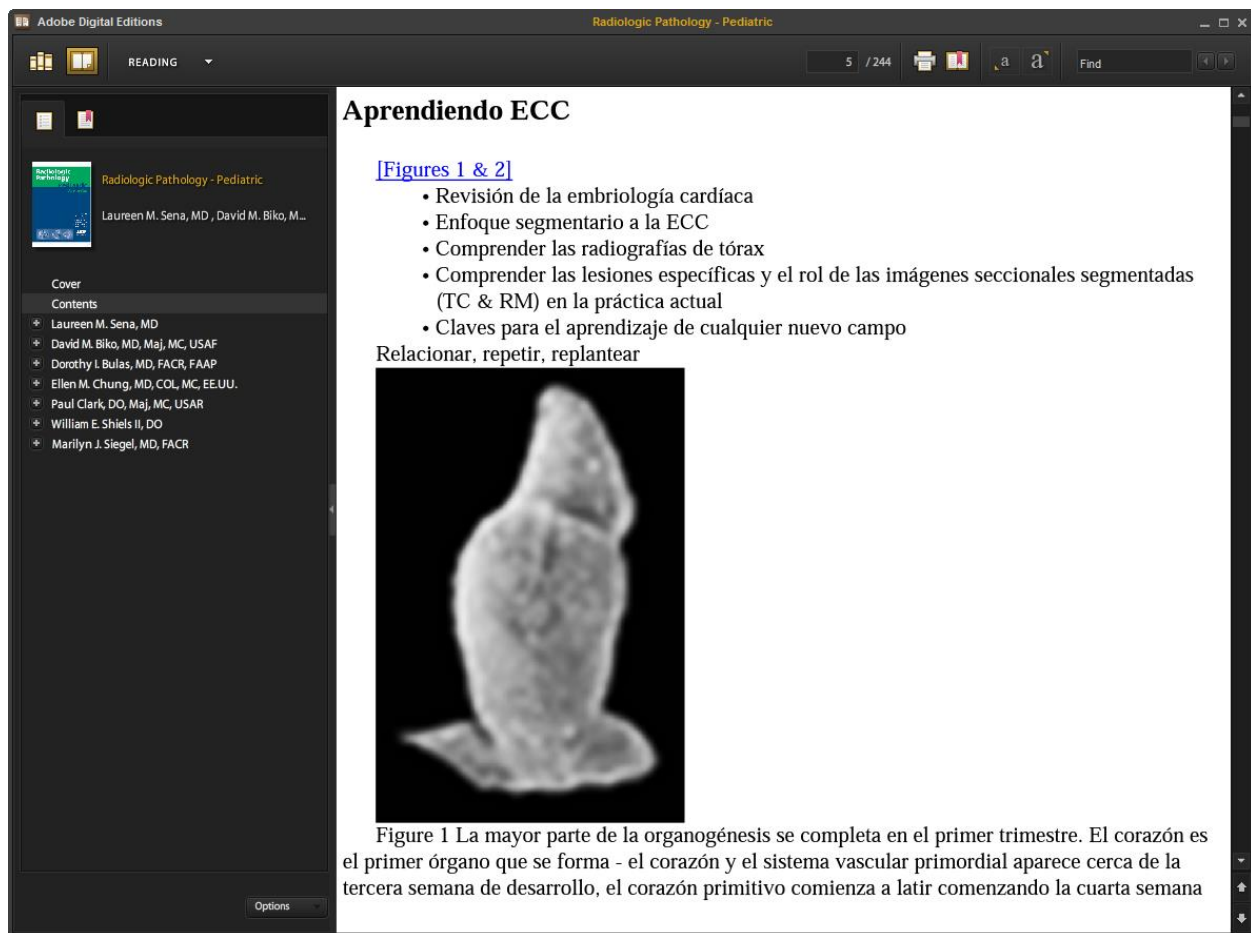
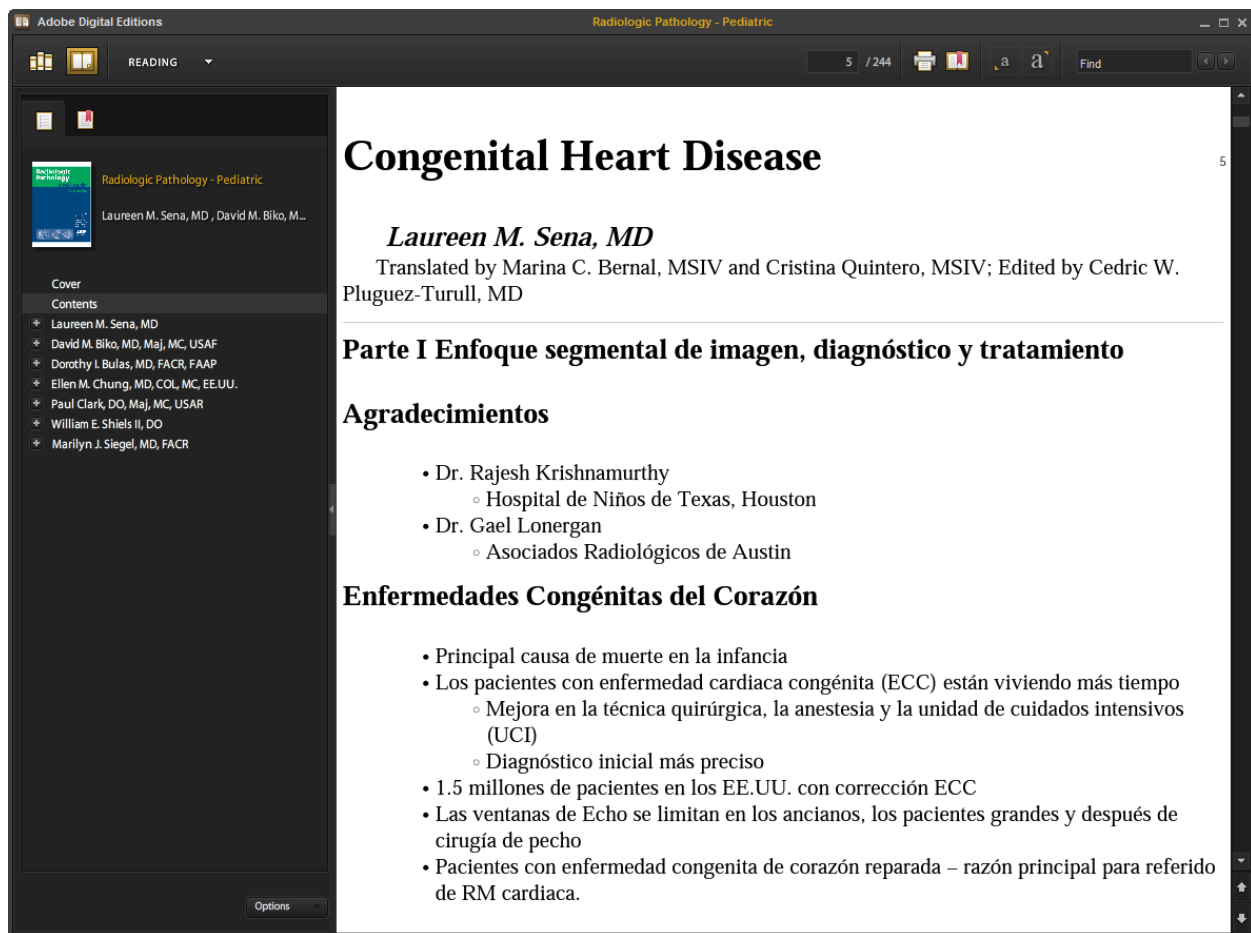
- Ureteral insertion
- Bladder filling defect
- Axis of collecting system
- Coexisting obstruction
- Intrarenal reflux

Ureterocele

Figures 29 & 30

- Dilation of the distal ureter usually caused by stenosis of the UVJ, with invagination into the bladder
- Ectopic versus simple
- In females, usually ectopic
- Can be so large as to cause obstruction of bladder outlet or contralateral UVJ
- With bladder filling, can evert into distal ureter and mimic a diverticulum





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Figure 4 A & B En la etapa de desarrollo del corazón tubo, la unión auriculoventricular o de entrada se conecta al ventrículo izquierdo y la vía de salida está conectada al ventrículo derecho. Los ventrículos derecho e izquierdo permanecen conectados a través del agujero interventricular primario, también llamado el foramen bulboventricular. En este punto, el ventrículo derecho tiene todo el flujo de salida (doble salida) y el ventrículo izquierdo tiene todo el flujo de entrada (entrada doble). From Heart Development, 1999.

Convergencia: Segunda fase de la torsión cardíaca

[Figure 5]

- Entrada atrial derecha se expande y se coloca sobre el ventrículo derecho (VD)
- El tracto de salida aórtico se pone sobre el ventrículo izquierdo (VI) - se alinea con el tabique interventricular muscular
- Curvatura interior es el sitio más crítico para el desarrollo cardíaco
- La curvatura interior define la región en la que los segmentos de las aurículas, nódulo auriculoventricular (AV), y la salida del ventrículo del corazón se encuentran en continuidad
- VD adquiere su entrada y VI adquiere su tracto de salida

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Morfología de los apéndices auriculares en la RM

[Figure 12]

- Orejuela de la aurícula derecha (RAA): triangular, trabeculado, de base amplia
- Orejuela de la aurícula izquierda (LAA): tubular, suave, de base estrecha

Figure 12 A & B Morphologic appearance of the atrial appendages.

Situs Auricular y Visceral

[Figure 13]

Figure 13 A & B Designación segmentaria del situs atrial como inversus (I), o ambiguo (A) en relación con su posición, el desarrollo de septum primum y las conexiones venosas. Cortesía de Ho y Reddy, Cardiovascular Imaging.

Options