The Lateral Chest X-ray: Forgotten But Not Gone

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Tips and Techniques

• Technique
• Chest wall
• Heart
• Airway
• Lungs
Alternative Lateral Views

• Right lateral for right sided abnormalities
• Military position for anterior mediastinal evaluation
  – Shoulders back, arms crossed behind back
No Laterals in NICU? Bad Situation (BS)

- Too hard to elevate the baby
- Not enough room between beds
- No one to hold plate
No Laterals in NICU? Bad Situation (BS)

- Too hard to elevate the baby
- Not enough room between beds
- No one to hold plate
- Exposure to the death ray
The Chest Wall

• Pectus can result in cardiac pseudo-enlargement on PA and lateral
• Pectus is similarly evaluated on lateral CXR as on CT or MRI
• Sternal ossification centers may not ossify in sequence
3.5% of young children have one or more sternal segments that are unossified or less well ossified than the others.


Missing Sternal Ossification Centers
Pectus Excavatum
CXR Haller Index Correlates Well With CT

Haller Index = \frac{B}{A}

The Heart

• Kerley B lines
  – Often best seen posterior to the sternum

• Heart size
  – The heart should be anterior to a line drawn along the posterior tracheal wall
  – The heart is enlarged if it overlies the spine
  – The bag of gold rule
Draw a line along the posterior wall of the trachea. If the line intersects the heart, the heart is enlarged.
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**BUT**

CXRs probably don’t accurately assess heart size anyway

Grotenhuis, et al. Ped Radiol; 45:1616-23
The Airway

• Coronal plane narrowing

• Symptomatic aortic arch anomalies almost always have an abnormal airway.
  – 10% abnormal only on lateral view

Pickhardt, et. al. Radiology 203:423-426
Right Arch
Right Arch
Lungs and Mediastinum

• Confirm hyperinflation
• Assess the hila
• Diaphragm, spine, and clear spaces
  – Felsen had it right
High Volume AP, Low Volume Lateral
Hilar enlargement seen only on frontal view isn’t real.

Hilar enlargement only on lateral view (without peribronchial thickening) probably is.
Thank You

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