Pediatric Breast Ultrasound

Sarah Sarvis Milla MD FAAP

Associate Professor of Radiology
Emory University School of Medicine
Children’s Healthcare of Atlanta- Egleston Children’s Hospital
Disclosures

None
Objectives

• Review common indications and respective diagnoses in pediatric breast ultrasound
• Recognize normal breast development
• Discuss up-to-date research to help reassure families
What’s new in breast sono?

- Not much
- Equipment is better, pathology same

Why this talk?
How we do it

• High resolution probe, 15 MHz
• Consider stand off pad
• Deep enough to see ribs
• All the breast- 4 quadrants and sub areola
• Contralateral side
• Measure/color flow lesions
• Still and cine images
• Clinical history
Common scenarios

- Case #1: Redness/swelling/pain
- Case #2: Asymmetric breasts
- Case #3: Palpable nodule/mass
Normal breast development

Ultrasound of pediatric breast and bumps

Natalie S. Valeur, Habib Rahbar, Teresa
Reminder of normal infant breast bud

2 week old female

1 year old
Normal development
Case#1: 2 week old female with redness/swelling

Neonatal mastitis
17 yr old F post partum redness/pain

Post partum mastitis
13 yr old with redness and tenderness

Mastitis with abscess
Case #2: 8 yr old Male with asymmetry

Asymmetrical breast bud
Gynecomastia
- Primary or secondary
- Can be transient
- Versus pseudogynecomastia
Case #3: 3 week old F with breast mass

Infantile Hemangioma
10 year old F palpable nodule

Cysts- likely blocked glands of Montgomery
14 yr old F with masses

Fibroadenomas
12 yr old f with hard painful breast mass growing for 2 months

Pseudoangiomatous Stromal Hypertrophy (PASH)
- Benign
- histologically similar to phyllodes tumor and low grade angiosarcoma, no erythrocytes or staining
- Usually in perimenopausal women
What does cancer look like?

Not common
Palpable masses- when to worry?

- Risk factors- Li Fraumeni, Lymphoma/leukemia, malignancy
- Sampling vs surgery?
  - 5 cm?
Recent Research

Analysis of surgically excised breast masses in 119 pediatric patients

Jamie Knell¹ · Jeffery L. Koning² · Julia E. Grabowski³

- No cases of malignancy; 75% fibroadenoma
- Only 31.9% of patients underwent some form of observation
- Patient/family anxiety was most common indication for surgery
“A common indication for surgical excision was patient and family anxiety, which is not unexpected given the current level of awareness of adult breast cancer.”

“However, in both our series and others the BI-RADS system has not shown good concordance between imaging characteristics and mass pathology.”
Objectives-Summary: Breast Sono

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Thank you!

• Sarah.Milla@choa.org