FUTURE OF PEDIATRICS TALKS!
A VIRTUAL SUMMER SERIES
A few notes about today’s Webinar

• All lines are muted throughout the webinar.
• Please use the Q&A box to ask questions or make comments.
• Today’s Webinar recording and slides will be posted to the PHN website following the presentation. You can find past FOP presentations on our website at https://pediatricrehealthnetwork.org/future-of-pediatrics/
Speakers

Bita Arabshahi, MD

Priya Vaidyanathan, MD

No conflicts to disclose:

• No financial or business interest, arrangement or affiliation that could be perceived as a real or apparent conflict of interest in the subject (content) of their presentation.

• No unapproved or investigational use of any drugs, commercial products or devices.
## Upcoming FOP Talks!

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Managing ADHD, Anxiety and Depression: A PHN ECHO

PHN announces the launch of our inaugural Project ECHO® Behavioral Health collaborative on September 16th, 2020. The 6 month project will feature:

• A focus on assessment, treatment and management of ADHD, anxiety and depression led by a team of mental/behavioral health specialists who will provide guidance and mentorship to practicing pediatricians.

• Monthly one-hour sessions that start with a 15 minute didactic session followed by a discussion of a case from a participating primary care provider’s practice.

• MOC part 4 and CME credit for participants.

Need more information? Register for one of our upcoming information sessions on Thursday, July 23 at 12pm or Monday August 4 at 12:30pm.

Register online at https://pediatrichealthnetwork.org/project-echo-information-sessions/
Practice Recovery Resources

PHN is offering peer collaboration events focused around practice recovery. Currently, we are planning to offer support for the next 6-12 months on an as needed basis. This plan may be customized to each practice’s needs and may include:

- Clearly defining your practice goals and how you will track success
- Sustaining and/or improving telehealth services
- Identifying possible revenue generating opportunities
- Identifying needs for ongoing Infection control measures
- Scheduling management
- Additional resources as needed

If interested, please email phn@childrensnational.org with specific areas of recovery that are of interest to your practice.
A Pediatrician’s Approach to a Young Child with Non-Traumatic Joint Effusion

Bita Arabshahi, MD, FAAP
Chief, Section of Pediatric Rheumatology, Pediatric Specialists of Virginia
Objectives

• To recognize which elements in history impact the degree of workup needed in evaluating a young child with joint effusion.

• To recognize red flag signs that suggest secondary causes of arthritis

• To decide when it is appropriate to refer to a subspecialist and which subspecialists should be considered
Scenario 1: 3 yo WF with a Swollen Knee

- The parents of a 3 yo WF bring her in for right knee swelling, noted incidentally 2 days ago when she came home from riding her tricycle. No trauma was witnessed. The child was walking fine and not complaining after the ride, but the next morning, woke up refusing to bear weight and was crying in pain. Parents gave her some ibuprofen. By mid-morning, she was running around with no difficulty, but after naptime, started to limp and had difficulty walking again. By evening, she seemed fine. The same pattern happened the next day.
- No fevers or weight loss. No current illness but you had seen her for a viral gastroenteritis 2 weeks prior. Mom has RA. No travel history.
- Differential?
Exam and Workup

• Knee effusion with mild contracture. Limps favoring left side. No focal bone pain. Left knee slightly warm.

• Xrays: no fracture. Suspected knee effusion

• Further workup or management?
Extent of Workup Often Guided by Duration of Symptoms:

- **Swollen knee**

  - Duration less than 6 weeks
    - Traumatic
    - Infectious
  - Duration greater than 6 weeks
    - Reactive Arthritis
    - Autoimmune
    - Malignancy
    - Lyme arthritis
Reactive/Post-Infectious Arthritis

- Often painful, but patient is able to move the joint
- Joints may be warm or slightly red
- Pain/swelling may be migratory
- No associated fevers or leukocytosis
- Duration less than 4-6 weeks
- Very NSAID-responsive
  - Best to use long-acting NSAIDs, like naproxen 15-20mg/kg divided BID for 2-4 weeks
Scenario 2: 3 yo with Swollen Knee

Six weeks later, you see the patient back. Her pain did respond relatively well to naproxen, but she still limps in the morning and after naptime. Otherwise active, happy, with no fevers or rashes.

Work up?
Workup of Joint Effusion> 6 weeks

Reasonable labs: CBC, ESR, CRP, Lyme ELISA with reflex to WB

Should you order a Rheumatoid Factor or Cyclic Citrullinated Peptide?
• No! less than 10% of children with POLYarticular JIA have a positive RF or CCP

Should you order an ANA?
• 20% of the population has a positive ANA in absence of rheumatic disease

Three reasons to order an ANA:
• In a child with suspected lupus based on objective signs/symptoms and baseline labs
• In a child with JIA to assess uveitis risk
• In a child with Raynauds to assess if Raynauds is primary or secondary
Appropriate Referrals in This Scenario

Pediatric Rheumatology for suspected Oligoarticular Juvenile Idiopathic Arthritis
Pediatric Ophthalmology to screen for asymptomatic uveitis (20% risk in ANA positive Oligo JIA)

Ophthalmology screening recommendations in children with JIA:

• Positive ANA and under 7 yo at onset of JIA
  • Every 3 months for 4 years
  • Every 6 months for 3 years, then yearly
• Negative ANA or over 7yo at onset of JIA
  • Every 6 months for 4 years, then yearly
Scenario 3: 3 yo with Swollen Knee

2 weeks after the onset of knee swelling, parents bring the child back. **No response to NSAIDs.** She is now having intermittent **fevers**, and random painful swollen joints which vary from day to day. She intermittently **refuses to bear weight**. Appetite is poor. She is very fussy. On exam, the left knee no longer appears swollen, but she has swelling of the right knee and left elbow with **exquisite tenderness**.

Workup?
Differential Diagnosis of Migratory Arthritis

Reactive arthritis, particularly lyme or strep/Rheumatic fever

• Jones Criteria (2 major OR 1 major with 2 minor)
  • Major: Migratory Arthritis, Chorea, E. Marginatum, SQ Nodules, carditis
  • Minor: elevated ESR/CRP, prolonged P-R, Arthralgia, fever

Malignancy/paraneoplastic syndromes
Workup Results

- WBC 4.5, normal diff
- Hgb 9.1
- Plt 140
- ESR 85
- CRP 20
- ASO <200, throat Cx neg
- Lyme ELISA negative
- Lyme WB negative IgG, Positive p23/p41 IgM
- Lucent metaphyseal band noted on Xray, suspicious for Leukemia
Red Flags that Arthritis is Not the Primary Issue

- Systemic signs
  - Fevers, night sweats, weight loss, bloody stools
- Severe joint pain
- Bone pain
- Pain waking patient up at night
- No thrombocytosis despite elevated ESR
- Anemia of chronic disease
Take Home Points

Differential for non-traumatic joint pain depends on:
• Duration of Symptoms
• Presence of systemic signs
• Laboratory workup

Symptom duration under six weeks with no systemic signs
• Trial of naproxen. No referral or workup may be needed if patient improves

Symptom duration over six weeks with no systemic signs
• Referral to Ped Rheumatology and Ped Ophthalmology

Red flag signs
• Laboratory workup will guide need to refer to rheumatology, oncology, GI or infectious disease