Welcome!

RA Mimics: Other Forms of Inflammatory Arthritis

Mimi Margaretten, MD

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Disclosure Statement

Planners Jennifer Mandal, MD, Leslie Dexheimer Gleason, RN, and Tabitha Foraker, MPH have stated they have no relationships to disclose. Speaker Mimi Margaretten, MD has stated she has no relationships to disclose.

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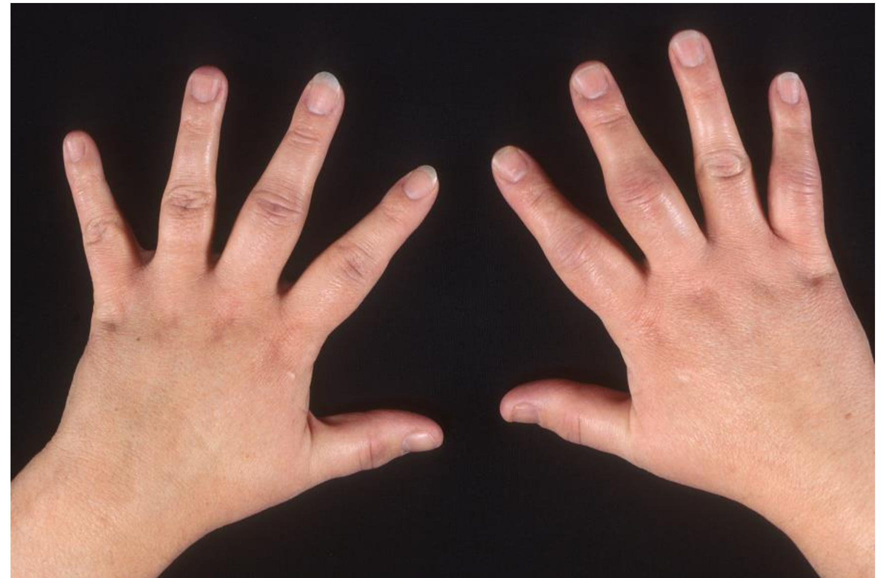
Case 1. 27 yo woman presents in clinic with 3 weeks of morning stiffness & "swelling in my wrists and fingers." Examination shows symmetric polyarthritis of wrists and PIPs. RF & CCP are negative, CRP 88 mg/L and ESR >120 mm/h. X-rays show soft tissue swelling without erosions. The factor that makes you most suspicious that this is NOT RA is:

A. Acute time course

B. Negative RF/CCP

C. Highly elevated CRP & ESR

D. No erosions on X-rays



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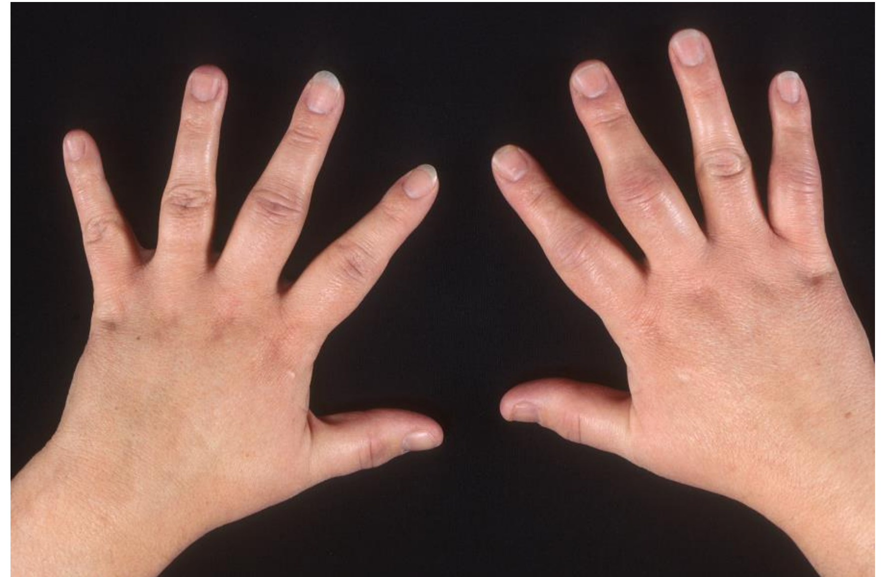
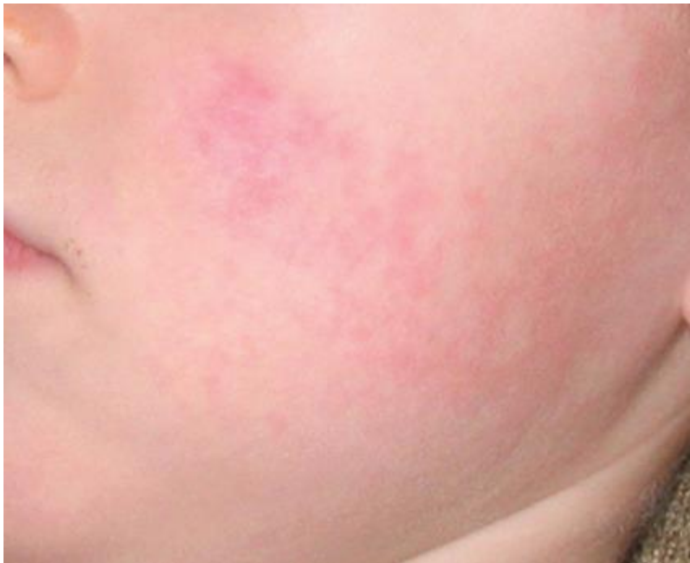
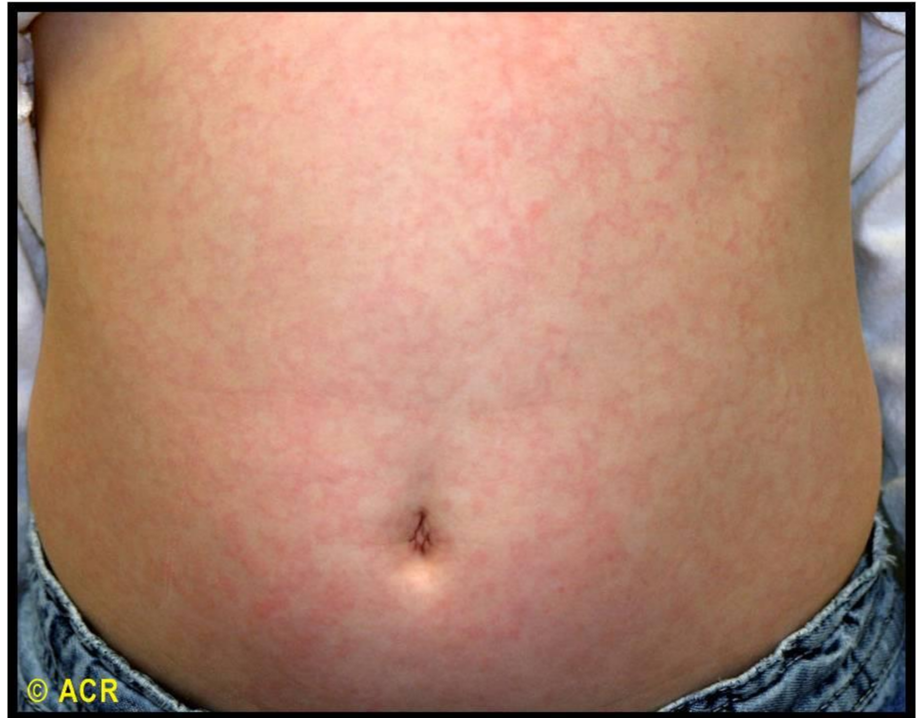


Viral Mimics of RA

- A number of viral infections can cause acute polyarthritis (rubella, parvovirus B19, acute Hepatitis B).
- RF can be positive with infections (i.e. chronic HCV) but anti-CCP negative.
- Remember to be suspicious with RF+/CCP- (only 5% of RA).

Case 1. con't. You obtain more history from the patient and she tells you that two of her 3 children were home from school a few weeks ago for a febrile illness and rash.



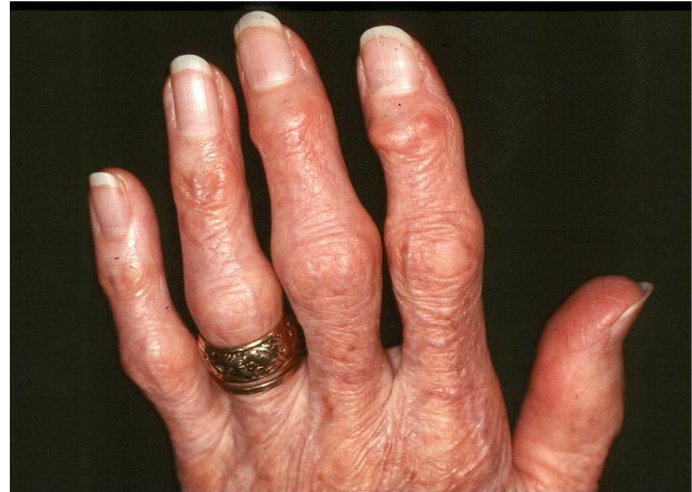


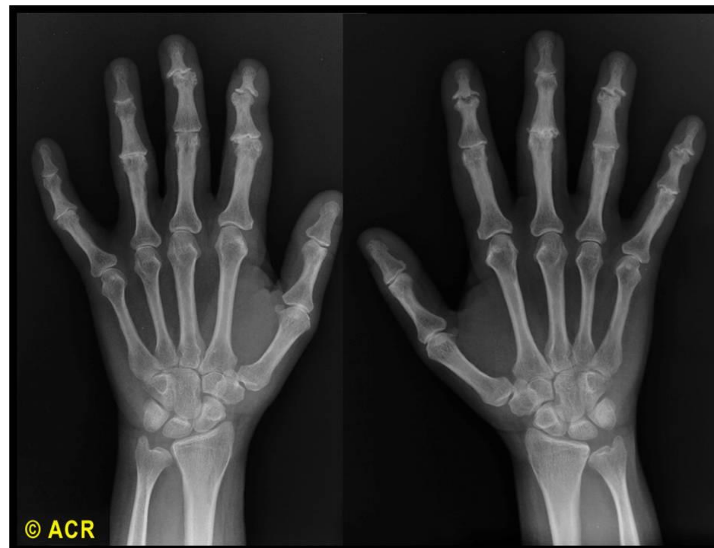
Viral Mimics of RA

- Human parvovirus B19, responsible for erythema infectiosum or Fifth disease in children, can cause inflammatory arthritis in adults.
- Although the median duration of Parvo B19 arthritis is 10 days, some patients may have arthritis considerably longer, leading to confusion with RA.

Case 2. 62 yo man presents with 8 months of stiffness & "pain & swelling in my fingers and knees." Exam shows symmetric polyarthritis of PIPs & DIPs & R>L knee effusions. RF-/CCP-. X-rays report "erosions." The factor that makes you most suspicious that this is NOT RA is:

A. Age and gender of patient
B. Chronic time course
C. DIP involvement
D. Knee involvement
E. Negative RF/CCP





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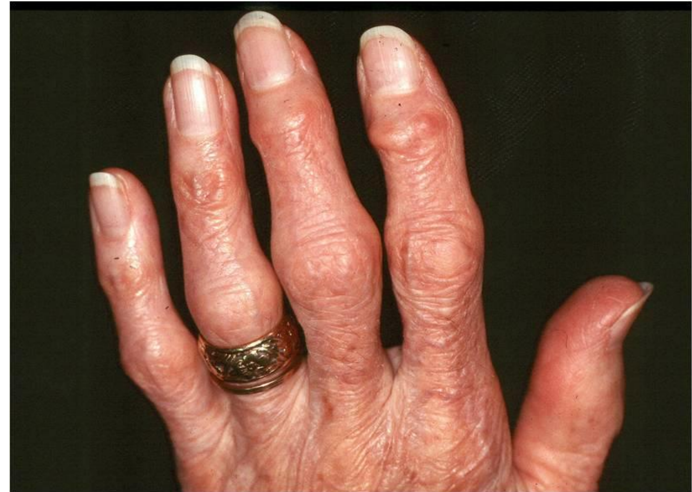

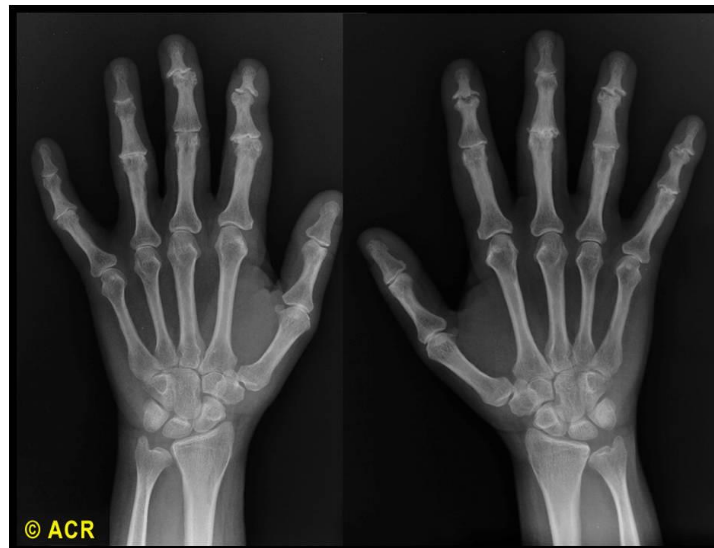

RA vs. OA

Feature	Rheumatoid Arthritis	Osteoarthritis
Primary Joints Affected	Wrists, MCPs & PIPs	1st CMC (base of thumb), PIPs & DIPS
Bouchard/Heberden Nodes	Absent	Often present
Joint Characteristics	Soft, warm tender	Hard and Bony
Stiffness	Worse after resting (i.e. morning)	If present can be in evening
Lab Findings	Often +RF/+CCP, elevated ESR & CRP	Normal ESR & CRP

Case 3. 44 yo woman presents in clinic with 8 weeks of morning stiffness, foot pain, & “swelling in my L middle finger & R knee.” Exam shows R knee effusion, L 3rd swollen finger, and tenderness with heel squeeze. RF & CCP are negative, CRP 88 mg/L and ESR >120 mm/h. X-rays show soft tissue swelling without erosions. The factor that makes you most suspicious that this is NOT RA is:

A. Knee involvement

B. 3rd finger swelling and heel tenderness

C. Negative RF/CCP

D. Highly elevated CRP & ESR

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A. Knee involvement

B. Dactylitis and enthesopathy

C. Negative RF/CCP

D. Highly elevated CRP & ESR

Case 3 con't. You obtain more history and learn that she endorses low back pain for years s/p car accident, an episode of food poisoning 1 month ago with vomiting and bloody diarrhea that resolved after 3 days, and a dry rash on her elbows that "comes and goes." Most likely she has:

A. Ankylosing Spondylitis
B. Psoriatic Arthritis
C. Reactive Arthritis
D. IBD associated Arthritis

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Reactive Arthritis

- Reactive arthritis = arthritis that develops **after** (rarely during except for Chlamydia trachomatis) an infection elsewhere in the body, but in which the organism cannot be recovered from the joint.
- Interval between the antecedent infection and arthritis ranges from several days to weeks.
- Causative GI, urogenital, & upper respiratory pathogens:
  - *Chlamydia trachomatis, Yersinia, Salmonella, Shigella, Campylobacter, E coli., C. diff,* & *Chlamydia pneumoniae*
- The following are more consistent with reactive arthritis than RA:
  - History of recent urethritis or enteric infection
  - Asymmetric pattern of joint involvement
  - Symptoms or signs of enthesopathy
  - Keratoderma blennorrhagica or circinate balanitis
  - Radiologic evidence of sacroiliitis and/or spondylitis
  - The presence of human leukocyte antigen (HLA)-B27

- **Case 4**. A 38 yo woman with RF+/CCP+ RA on MTX and Humira comes to clinic for routine f/u. She reports L knee pain and swelling. Exam shows:
  - Wrists/hands: unchanged ↓flexion of wrists and swan neck deformities without synovitis.
  - Left Knee: Erythema, warmth, & decreased range of motion with a moderate effusion
  - Feet: no MTP tenderness to squeeze
- Next step . . .

- Next step = arthrocentesis for synovial gram stain, culture, cell count, crystal ID)
- Monoarticular inflammatory arthritis in an immunosuppressed patient with RA is infection (septic arthritis) until proven otherwise
- After you rule out septic arthritis with negative synovial culture then you can treat “RA flare”
- Risk factors for septic arthritis include:
  - Pre-existing joint disease
  - Immunosuppression
- Knee is involved > 50% of the time
- *S. aureus* is most common pathogen
- Treatment = joint drainage + IV antibiotics
- “Do not treat an infection with steroids”

Case Presentation

Dr. Jennie Wei

CME Credit Link