General Internal Medicine Noon Conference

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Case 1

- 75 yo AA male c/o wt loss
- Unintentional, 40 lbs in 6 mo
  - ↓ appetite, ↓ interest in food, gets full
  - No abd pain/change in bowel habits or stool
  - No N/V/heartburn, dysphagia/odynophagia
- No F/C/SOB/cough/NS/Headaches
- Worse body/joint pain and fatigue x 2wks
  - Knee- ankle-shoulder-wrist pain x 1-2 yrs
  - No muscle weakness/gait problems

Case 1

- PMHx:
  - Osteoarthritis
  - Tobacco use
  - Obesity
  - Anemia
  - R knee pain/swelling
    - 3 mo ago
- SurgHx: none
- NKDA
- SocHx:
  - Lives w/wife
  - Quit tobacco 3 wks ago, 40p-y-h
  - No ETOH/IVDU
- Meds:
  - Tylenol prn
  - Lortab prn
  - Nexium
  - Mirtazapine

Case 1- Exam

- T99.8, HR 110, BP 107/72, RR 20,
- Wt 189lbs (219 4mo prior)
- Comfortable, thin male, NAD
- No temporal wasting, +pallor, op clear, mmm, no thrush
- Chest CTA, symmetric BS
- CV:RRR without m/g/r
- Abd: NABS, soft, ND, NT, no masses/HSM
- Extr: no c/e/c, skin warm, no rashes
- MSK: joints cool to touch, no effusion/deform

Case 1- Data

7.7 72
7.0 345
24 18

N 66, L20, Eo 0.9, M12

138	99	23	103
4.2	30	2.1 (1.2)	

INR 1.2

Ca 8.3
Alb 2.3
TP 7.9
LFT's wnl

CXR: wnl

UA: wnl

TSH: wnl

TIBC:142
Fe: 17
Ferritin: 800

B12: 544
Folate:14
Retic: 0.9

ESR: 126
CRP: 31

Case 1- More Data

- PSA: wnl
- SPEP/UPEP/IFE: wnl
- HIV/RPR neg

- EGD: mild inflammation GEJ,
  - Bx and H pylori neg
- Colonoscopy: benign polyps, hemorroids

- CT chest-abd-pelvis:
  - mild retroperitoneal LAD, no masses

Case 1- Review of records…

- 3 mo prior- swelling/pain in R knee
  - Synovial fluid-
    - turbid, wbc 16.000 (90%segs)
    - Neg crystals/GS and culture
  - Plain film- DJD changes, peri-articular osteopenia
  - MRI knee- extensive synovial proliferation filling joint space. No erosions. Meniscal tear.

- Additional labs
  - RF: 112 (<14)
  - Anti CCP: 70 (<20)
  - SSA/SSB/ANA: neg
  - ANCA: neg

Rheumatoid Arthritis

- Multisystem, chronic, inflammatory disorder characterized by destructive synovitis.

- Diagnostic criteria (ACR/EULAR)
  - Inflammatory arthritis of ≥ 3 joints
  - + RF and/or anti-CCP
  - Elevated CRP or ESR
  - Duration of symptoms > 6 weeks.
  - Exclude diseases with similar clinical features

Elderly Onset RA (EORA)

- Disease onset >60yo (2%)
- Different clinical subset of RA:
  - Balanced sex distribution 2:1 (vs 4: 1)
  - Large joint involvement (‘**PMR-like**’)
  - Constitutional symptoms (**fever, wt loss, fatigue**)
  - More acute onset
  - Lower RF
  - Higher ESR

Drugs and Aging 2009; 26(9):739-750

EORA-Differential Diagnosis

- Crystal arthropathy (gout, pseudogout)
- Osteoarthritis
- Spondyloarthropathy
- Polymyalgia rheumatica
- Connective tissue disease/vasculitis
- Malignancy-related arthritis
- Hypertrophic osteoarthropathy
- Sarcoidosis
- Infectious arthritis (hepatitis B and C, HIV)

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Weight Loss in the Elderly

- Malignancy (15-35%)
  - GI (50%), Lung, Lymphoma, Prostate, Ovarian ca
- Non-malignant GI (11-19%)
  - Motility/swallowing
  - Gallstones/PUD
  - Mesenteric ischemia
- Chronic disease
  - CHF (2-9%), COPD (6%), Endocrine (4-11%)
  - Neuro (2-7%), ESRD, (4%), CVD (2-4%), infection (2-5%)
- Medication Side Effects
  - Anorexia, dry mouth, n/v, altered taste/smell

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9 *Ds* of Weight Loss in the Elderly

- Dementia
- Depression
- Disease (acute and chronic)
- Dysphagia
- Dysgeusia
- Diarrhea
- Drugs
- Dentition
- Dysfunction (functional disability)

(Don't know was later added as a 10th "D")

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Weight Loss in the Elderly:

- Baseline Evaluation
  - CBC
  - BMP
  - LFT
  - TSH
  - ESR/CRP
  - LDH
  - UA
  - FOBT
  - CXR

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Case 2

- 23 yo AAF c/o 5-6 days nausea/vomiting
- 1-3 emesis/day, non-bloody, unrelated to meals
- Can keep some PO's, appetite OK
- No fever/abd pain/viral syndrome
- Stools 2-3/day, ↓consistency, no blood or mucous
- No travel, no ill contacts
- Feels tired, 2mo newborn at home

Case 2

- ROS:
  - Fatigue, hair loss like other pregnancy
  - 10# wt loss since delivery (breastfeeding)
  - No sob/cp/edema
  - Not sleeping well, irritable

- PMH: G2P2, SVD x 2, no complications
- Meds: PNV
- SH: no tobacco/ETOH/drugs, homemaker. No recent travel.
- FH: mom w/SLE and DM

Physical Exam

- VS: Temp 100.3 P 130 BP 144/73 R20
- Comfortable
- PERRL, conj pink, no exophthalmous, MMM
- Small goiter, NT, no LAD
- Abd soft, ND, mild epigastric tenderness, no r/g, incr BS, no HSM
- Skin moist, smooth, no rashes, no jaundice
- + fine tremor
- Brisk DTR's b/l, nl strength/sensory exam

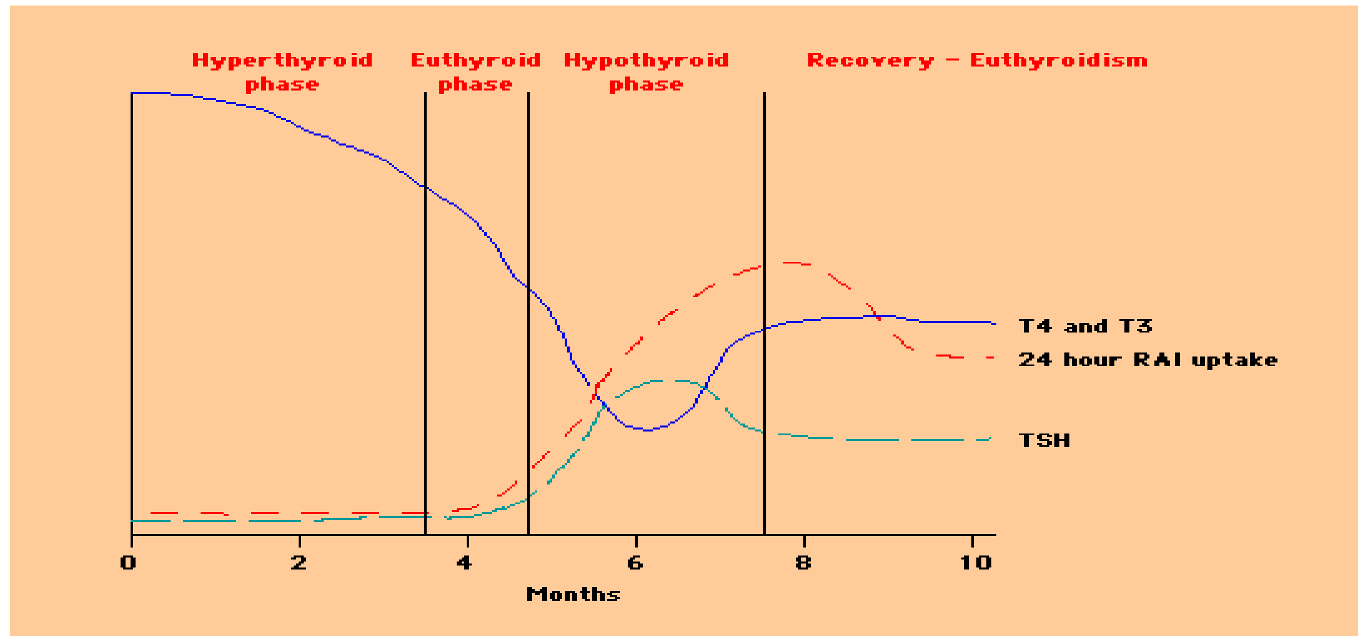
Labs:

- Negative HCG ☺
- Hct 35, MCV 67
- Normal BMP, LFT's
- EKG: ST@ 130
- TSH: undetectable
- FT4: 6.7 (high)
- TSI: mildly +
- Iodine Uptake: Increased

Postpartum Hyperthyroxinemia: Thyroiditis vs Graves' disease

- Postpartum Thyroiditis:
  - Variant of chronic autoimmune thyroiditis (Hashimoto's)
  - 3 to 16% of postpartum women, w/in 1yr
  - It usually presents in one of three ways:
    - Transient hyperthyroidism (20-40%)
    - Transient hypothyroidism (40-50%)
    - Transient hyperthyroidism, hypothyroidism, recovery (20-30%)
  - 20-50% persistent hypothyroidism at 4 ys
  - Likely to recur with other pregnancies

Postpartum Thyroiditis



Characteristic course of subacute thyroiditis The initial thyroid inflammation damages thyroid follicles and activates proteolysis of the thyroglobulin stored within the follicles. The result is **unregulated** release of large amounts of thyroxine (T4) and triiodothyronine (T3) into the circulation and therefore hyperthyroidism. This state lasts only until the stores of thyroglobulin are exhausted, because new hormone synthesis ceases. As the inflammation subsides, the thyroid follicles regenerate and thyroid hormone synthesis and secretion resume. There may be a transient period of hypothyroidism and increased TSH secretion before thyroid secretion becomes normal again. However, some patients have only a hyperthyroid or hypothyroid phase.

Postpartum Thyroiditis

- Mild disease (clinically/biochemically)
- Small, nontender goiter
- NO EXOPHTALMOUS
- ↑ thyroglobulin
- Elevated anti-thyroid peroxidase Abx (65-85%)
- ↓ radioiodine uptake
- Treatment depends on degree of sxs
  - Hyper- Beta-blockers until T4-T3 normalize
  - Hypo- T4 (50-100 mcg/d) x 8-12 weeks, then stop/re-eval

Graves' Disease in post-partum

- Recurrent or new-onset
- More symptomatic, higher T4-T3 levels
- Larger goiter
- May have Graves' ophthalmopathy
- ↑TSI
- Treatment:
  - Beta-blockers +/- Antithyroid drugs
  - RIA
- Distinguished from Thyroiditis by:
  - Clinical course
  - ↑Radioiodine uptake

Case 3

- 54yo WF c/o painful joints and rash
  - X 2 days
  - Woke up R hand pain/erythema/swelling
  - Stiffness of all joints of hand
  - L hand→wrists→knees→shoulders→jaw
  - Pain is sharp, constant, ^ with movement
  - Cannot walk/make a fist
- Weakness, decr appetite
- No fever/chills/cough
- Erythematous rash neck/forearms

PMHx

- Recent admission for Cdiff diarrhea
  - Rx Cipro/flagyl→ PO flagyl on d/c
  - Diarrhea tapering down
- HTN
- Osteoarthritis- x many years, L knee
- Asthma/OSA
- Hyperlipidemia
- Obesity
- GERD
- Bipolar do

Case 3

- PSHx:
  - Appendectomy
- FamHx:
  - Parents HTN, DM, CAD
  - Daughter with SLE, RA and hypothyroidism
- SocHx:
  - married, not working, denies E/T/D.
- Meds
  - Advair, Albuterol
  - Avapro, HCTZ
  - Singulair
  - Crestor
  - Nexium, Reglan
  - Celebrex
  - Calcium, Vit D
  - Flagyl
- NKDA

Case 3 - Exam

- T 100.1, HR 100, BP 123/66, RR 20
- Mod distress, in obvious pain
- PERRL, nl conj, OP clear
- Neck supple, no LAD/goiter
- Lungs CTA
- CV tachy but regular
- Abd soft, ND, NT
- MSK tender, swollen, warm joints
  - MCP/PIP/DIP, wrists/knees/ankles
  - + effusion, decr ROM due to pain/eff

Case 3- Data

CBC (fishbone): WBC 9.4, Hgb 14.5, Hct 27, Plt 388; 78, 15

N 76, L16, Eo1, M8

BMP (fishbone):

140	109	7	100
3.8	25	0.6	

Ca 8.4
Alb 2.9
LFT's wnl

INR 1.2

CXR: wnl

UA: tr pr/ket, no blood

ESR 85 | CRP 37 | CK 50 | BCx negative

RF - | Anti-CCP - | ANCAs - | SSA/SSB -

Hep A/B/C - | ASO 591 (high) | Rapid Strep -

Reactive Arthritis

- Acute, sterile, inflammatory, oligoarthritis
  - Typically large LE joints
  - Extra-articular features
    - Conjunctivitis + uveitis + arthritis = Reiter's
    - Urethritis, balanitis, entesopathy, keratoderma
- Most common enteric infections
  - Shingella, Salmonella, Campylobacter, Yersinia
  - Clostridium difficile

Clin Rheumatol 2008; 27:253-255
Medicine 2001; 80: 88-101

C. diff Reactive Arthritis

- 1976 – Rollins & Moeller
  - 1st case pseudomembranous colitis assoc arthritis
- Diagnostic criteria (1993):
  - Sterile, reactive arthritis with preceding diarrhea and/or biopsy evidence of colitis
  - Prior antibiotic exposure
  - Microbiologic proof of C. diff (cytotoxin)
  - No alternative diagnosis for arthritis or diarrhea

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C. diff Reactive Arthritis

- Series 36 patients
  - Fever non-universal (14), knees/wrists
  - Onset 1-35 days after colonic symptoms
  - Synovial WBC 2,100-67,000
  - Average 2 month duration, good prognosis

- Treatment
  - Corticosteroids, NSAIDS
  - Treatment of colitis

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C. diff Reactive Arthritis

- Under-recognized
- Failure to identify preceding infection
  - 20% C. diff have only mild diarrhea
  - Series 31pts undifferentiated arthritis
    - 6 toxin A +, 5 antibiotic assoc diarrhea
- Increase awareness
  - Test for C. diff in undifferentiated arthritis
    - recent diarrheal illness
    - antibiotic exposure

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Teaching Points

- Case 1
  - Make sure you look at the whole picture
    - Look back in time and review records
  - Atypical disease presentation in the elderly
    - EORA
- Case 2
  - Thyroid disease can present in post-partum period
  - Iodine uptake can differentiate Grave's from thyroiditis
- Case 3
  - Remember C. diff as a possible cause of reactive arthritis
  - Test for C. diff in new arthritis and recent antibiotic exposure or diarrhea