Name: Mr. B.
Age: 60
Gender: male
Race: black
Source/Reliability: patient/very good

Subjective

CC: "swelling in stomach and leg pain" x 2 months

HPI
Mr. B. is a 60-year old male with a history of HTN and CHF presenting with ascites, bilateral lower extremity edema and pain. During the interview Mr. B. also reported migratory joint pain and swelling for the past 2 years that has progressively gotten worse.

Ascites/Edema - The patient reports gradual, unprovoked increased swelling that started in his ankles and steadily progressed upward to his abdomen over the past 2 months. Swelling is equal in both legs, worse end of the end of the day (with dependency) and slightly reduced (about 1/3) in the morning (or if he remains seated during the day with his legs elevated for several hours). Swelling is greater in his feet, ankles, legs and abdomen but less in his thighs. His abdominal swelling started about 1 month after his legs. Patient denies any upper extremity and facial swelling. Patient reports moderate pain/tightness (5 out of 10) associated with the swelling in his legs and abdomen. Two weeks ago Mr. B. reported to his PCP who doubled his Lasix to 80 mg. This reduced the swelling slightly in his legs, but not his abdomen. Associated symptoms in include fatigue, weight gain (approx. 5 lbs. in the past 2 months), cough (with minor clear sputum production), dyspnea on exertion, 2-pillow orthopnea, claudication and early satiety. . Patient denies diaphoresis, fevers/chills, night sweats, chest pain/pressure, palpitations, syncope, asthma/wheezing, pneumonia, TB, positive PPD, positive CXR, PND, varicose veins, leg/foot ulcers, history or family history of DVT/PE. Patient denies dysphagia, nausea/vomiting, reflux/heartburn, diarrhea, constipation, melena/hematuria, incontinence, dysuria and hematuria. Patient admits to increased urinary frequency and nocturia associated with diuretic increase. Patient reports similar symptoms during 2 previous exacerbations of his CHF (latest 1 year ago).

Joint pain – The patient reports migratory pain and stiffness in both ankles and knees that has been increasing in severity for the past 2 years. He states the pain ranges in severity from 3 to 10 (out of 10), usually lasts 2-3 days per joint then moves to a different joint or resolves for a few days. He is currently experiencing severe pain (10 out of 10) in his left ankle. Pain is aggravated with increased activity and during times when his extremities are swollen from his CHF exacerbation. Pain is partially alleviated by rest and ibuprofen. Patient admits to stiffness (worse in morning or with inactivity) that resolves in 5-10 minutes with movement and reduced ROM due to pain/stiffness. Patient admits to low back pain and spasms exacerbated by inactivity during the same 2 year period. Patient admits to joint swelling in his ankles and knees. Patient admits to swelling in his elbows that has developed over the past month. Patient denies neck, shoulder, elbow, hand/wrist/finger, hip pain, foot/toe pain, erythema, tenderness and history or family history of gout or arthritis. Patient denies fever, anemia and lymphadenopathy. Patient denies rash, petechiae, pruritus, abnormal bruising/bleeding, hot/cold intolerance and frequent infections/illnesses. Patient denies head pain, nasal obstruction, post nasal drip, epistaxis, oral abscesses and gum lesions. Patient denies vision changes, vertigo, dizziness, peripheral numbness, paresthesia, weakness, equilibrium, coordination and gait changes. Patient denies any previous laboratory, imaging studies or diagnoses for his joint pain. Patient denies ever having any joint swelling that was not in conjunction with his extremity swelling/edema.

Patient denies memory loss, confusion, apprehension, anxiety. Patient admits to depression. Patient denies recent travel, trauma, new medications, topical agents or contacts to allergens or toxins.

PMH

- **Allergies**: Patient reports no allergies to medication, food or environmental substances.
- **Hospitalizations**: CHF exacerbation (2010, 2013).
- **Illnesses**: CHF (Dx 2009), HTN (Dx 1976), depression
- **Immunizations**: Up to date per patient.
- **Surgeries**: none
- **Trauma**: none
- **Medications/supplements**: furosemide 80 mg QD (CHF/HTN), isosorbide dinitrate 10 mg TID (CHF), torsemide 100 mg QD (CHF), carvedilol (CHF), losartan 100 mg QD (HTN), OTC Ibuprofen (PRN for joint pain)
- **Youth illnesses**: chickenpox

Patient admits to regular compliance with all prescribed medications and denies any serious complications or side effects.

FH and SH

Patient has an 18 pack year smoking history (quit 12 years ago), drinks alcohol socially (1-2 drinks/month) and has never used illicit substances. He categorizes his diet as good with a variety of foods (lean mean, fruit, vegetables, grains) but admits to eating mostly meat (chicken and red meat) with very few vegetable and grains up until about 2 years ago. When feeling well he exercises with weights and swimming 3-4 times/week. Patient is married, but has been separated for many years. He lives with a friend who provides mutual support and care. She has 5 adult children, all healthy. His mother died at 66 and his father died at 86, both due to complications from HTN and CHF. He denies any known family history of autoimmune diseases. *Patient states he served 1 year in the Marine Corps (military police) and received a medical discharge in 1976 for HTN and depression. He is not on disability, but is currently retired.*

Objective

Admission Vitals:	T 36.5 C (oral)	RR 20 BPM, unlabored	HR 93 BPM, regular
	SPO2 – 98% on RA	BP-Rt arm sitting: 94/60 mmHg	
	Height 185 cm; weight 82 kg; BMI 24		

General Inspection: 60 year old male sitting up in a chair in no apparent distress. Patient is cooperative, alert and oriented x 4. Speech is fluid and appropriate. Skin is warm and moist with adequate skin turgor and full hair distribution on scalp, trunk and extremities. No pallor, jaundice, cyanosis or clubbing. Capillary refill < 2 seconds on nails of hands and feet.

HEENT: Normocephalic/atraumatic. Eyes: PERRLA. Conjunctiva pink with no scleral jaundice. Mouth: Moist mucosa, No lesions, inflammation or exudate to oral mucosa, tongue or gum line. Ears: No lesions, scars, papules or nodules noted on helix. Neck: Supple and trachea midline. No thyromegally.

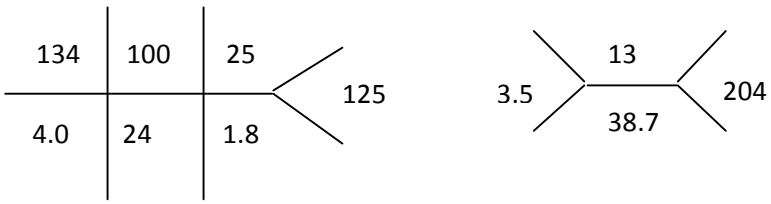
Lungs: Equal and bilateral chest rise, breathing unlabored with good respiratory effort no accessory muscle use. No tenderness on palpation of sternum, anterior or posterior thorax. Resonant percussion over all lobes. Lung sounds clear on inspiration/expiration, anterior and posterior with no rhonchi, crackles or wheezing with no areas of diminished breath sounds.

Cardiovascular: No pulsations, thrills, or heaves. PMI located in 5th intercostal space, mid-clavicular line. Regular rhythm of S1 and S2 heart sounds audible at the aortic, pulmonic, tricuspid, and mitral areas. No murmurs, gallops, ectopic beats or pericardial friction rub. Carotid pulses are non-bounding without bruits. JVD 4 cm (external jugular) at 30.

Extremities: Bilateral radial and dorsalis pedis peripheral pulses present and 1+. Bilateral, non-tender pitting edema (grade +1) to knee. Negative Homan's sign. Biceps and patellar reflexes 2+ and symmetric with plantar reflexes downgoing.

Musculoskeletal: Full range of motion and strength 5/5 in neck, shoulder, elbows, wrists, hands and feet. Range of motion and strength not tested in hips and knees. Shoulder: No tenderness, deformities, effusion or crepitus noted with palpation of clavicle, SC and AC joints bilaterally. Elbow: Nodular masses noted on bilateral olecranon (3cm, round, soft, mobile, non-tender, non-erythematous, without warmth). Medial and lateral epicondyles palpable bilaterally and non-tender without crepitus or warmth. Hands: No tenderness, effusion or crepitus of bilateral wrist anterior, posterior, medial and lateral joints lines, MCP, PIP and PIP joints. Non-tender, bony nodule noted at right 1st MCP. Knee: No tenderness, warmth, deformities or crepitus upon palpation of medial and lateral joint lines, femoral condyles, patella, tibial plateau and tibial tuberosity. Ankles: No tenderness, deformities or crepitus upon palpation of medial and lateral malleoli and anterior tibiotalar joint. Feet: No tenderness, effusion or crepitus of bilateral metatarsal heads. Non-tender, bony nodule noted at 1st MTP bilaterally with hallux valgus. Moderate lower extremity edema (1+) to knees bilaterally.

Admission Labs



Assessment

Mr. B. is a 60 year old male with a history of CHF and HTN (controlled) presenting with ascites and bilateral lower extremity +1 pitting edema to knees with associated fatigue, dyspnea on exertion and cough for 2 months. Patient denies chest pain/pressure, palpitations, diaphoresis and nausea/vomiting. Symptoms are most likely due to CHF exacerbation. *Assessment and Plan of CHF exacerbation (ascites/edema) to be managed by internal medicine team.*

Patient also reports migratory joint pain primarily in knees and ankles, exacerbated by edema, but steadily worsening in severity and frequency over the past 2 years. Physical exam reveals soft, non-tender, non-erythematous bilateral 3cm nodules on elbows as well as bony deformities of right 1st MCP and bilateral hallux valgus. The most likely diagnoses are as follows: Nice DDX

1. Tophaceous gout: - Most likely due to migratory pattern of joint pain, presence of olecranon nodules, bony deformities of MCP and MTP joints and diuretic use. Patient denies previous acute attacks of acute gouty arthritis (podagra), but tophi can develop without this occurrence.
2. Osteoarthritis: Possible due to progressive joint pain exacerbated by use and partially alleviated by NSADs. Less likely due to migratory pattern of joint pain and presence of olecranon nodules.
3. Rheumatoid arthritis: Least likely due to monoarticular involvement and migratory pattern of pain. Bony deformities of tophaceous gout may resemble rheumatoid nodules and should be ruled out.

Plan

Diagnostic

- Joint aspiration with synovial fluid analysis
    - Cell count and differential, gram stain, culture and sensitivity and microscopic analysis for crystals
- Serum uric acid
- Thyroid function
- Liver function

- 24-hour urinary uric acid
- Plain radiographs 3 –views (elbows, knees, ankles)

Therapeutic

- Acute flare
  - Prednisone 40mg, PO, QD for 3 days then tapered over 2 weeks
- Chronic management
  - Only begin therapy after acute flare is resolved
  - Long term depends upon results of 24-hour urinary uric acid
    - If uric acid over-producer – Probenecid 250 mg BID PO x 1 week then increase to 500 mg BID PO
    - If uric acid under-excretor – Allopurinol 100 mg QD PO
    - Adjust doses as necessary to reach goal serum uric acid level of 6 mg/dL
      - Probenecid – up to 2 g/day
      - Allopurinol – up to 800 mg/day
  - Request nutrition consult for continued dietary management of gout.

Patient Education

Inquire about the patient's understanding of gout and the medications prescribed to manage the symptoms and reduce hospitalizations. Explain medication side effects and signs for worsening. Discuss the importance of managing gout to prevent permanent bony deformities and joint destruction. Some medications used to treat CHF (e.g. thiazide diuretics and ACE-inhibitors) can cause/exacerbate gout. Patient is already on recommended/alternative medications. Stress the importance of diet as uric acid is a breakdown product of purine. High-purine foods such as organ meats shellfish, cold water fish (sardines, salmon, trout), veal, bacon and turkey should be limited but not avoided altogether. Avoid excess alcohol consumption and foods/beverages sweetened with high-fructose corn syrup. Continue non-weight bearing resistance exercise program to retain muscle strength and range of motion. Refer to rheumatology and inform cardiology of newly diagnosed gout to ensure optimal management comorbid condition.

Problem List

1. Joint pain
   a. Olecranon nodules
   b. Bony deformities
2. CHF - exacerbation
   a. LE edema
   b. Ascites
   c. Dyspnea on exertion
   d. Cough
3. HTN (controlled)
4. Depression (untreated)
5. HX of tobacco use (18 pack years), quit 12 years ago

References

Andreoli, Thomas E., Benjamin, Ivor J., Griggs, Robert C., Wing, Edward J. Chapter 87. Crystal Arthropathies. In: *Andreoli and Carpenter's Cecil Essentials of Medicine*. Philadelphia, PA: Saunders Elsevier, 2010.

Pittman JR, Bross MH. Diagnosis and management of gout. American family physician.

Gout and Pseudogout. [updated 13 May 2014]. Medscape. Retrieved from http://www.medscape.com.

Osteoarthritis. [updated 13 May 2014]. Medscape. Retrieved from http://www.medscape.com.

Rheumatoid arthritis. [updated 13 May 2014]. Medscape. Retrieved from http://www.medscape.com.