Hypercalcemia, AKI, hepatosplenomegaly, and generalized Lymphadenopathy as clinical presentation of Sarcoidosis. Case Report.

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Patient History

- Patient is a 41 years old African-American male with PMH of depression, tobacco use, recurrent uveitis and cataract in left eye, hx of positive PPD, he was found to have an AKI, hepatosplenomegaly, and enlarge lymph nodes in is abdomen in his PCP office concerning for lymphoma or sarcoidosis
- He presented as a direct admission after been found to have severe hypercalcemia on CMP done in the office.
- He was complaining of mild SOB on exertion, abdominal bloating, and constipation
- Repeat CMP confirmed hypercalcemia of 15.2 with elevated ionized Ca
- He was treated with Normal saline bolus and continue maintenance, Calcitonin and Zoledronic acid as per protocol.
Patient Physical Exam

- Vitals signs: Temp 97.7 HR 70 RR 18 BP 133/88
- Signs of mild dehydration
- Macular rash in trunk
- Lungs: Clear to auscultation bilaterally.
- Cardiovascular: Heart regular rate and rhythm, S1, S2 normal, no murmur, click, rub or gallop, Pulses 2+ and symmetric and No edema
- Abdomen: Mild epigastric tenderness and hepatosplenomegaly present.
- Axillary and inguinal lymphadenopathies
In the setting of AKI, hypercalcemia, lymphadenopathies, and hepatosplenomegaly, there was an initial concern for lymphoma and other malignancies. However, Sarcoidosis, TB, fungal diseases and other generalized granulomatous diseases were in the differential.

The initial work up included CMP, Ionized Calcium, CBC with diff, PTH, PTH-RP, CRP, ESR, CT abdomen and chest.

Patient was consulted with nephrology. Vit D 1.25- dihydroxy, Vit D 25-hydroxy and Angiotensin Converting enzyme levels were ordered. IR was consulted and an US guided core needle lymph node biopsy was performed in the left inguinal area.
Biopsy report: non-necrotizing granulomas. Acid-fast stain is negative for mycobacteria. gms stain is negative for fungi. Flow cytometric studies showed no evidence of lymphoma. In an appropriate clinical setting, these findings would be consistent with sarcoidosis.
Diagnosis and Discussion. Cont.

► Patient was started on Prednisone 40 mg po daily.
► Calcium level was normalized
► Patient was seen by his nephrologist 2 weeks after discharge. His renal function improved with a creatinine level of 2 mg/dl and prednisone dose was reduced to 20 mg.
Significant Test Results

Total calcium 15.2 H
Ionized calcium 7.60 H
Serum Creatinine 3.82 H
CRP 1.2 H
Angio convert enzyme 106 H
Vit D 1.25- dihydroxy 135 H
Vit D 25-hydroxy 17 L
PTH <6.3 L
PTH- rp 3.1 H
ESR 92 H
CT abdomen and pelvis:
Images

HEPATOSPLENOMEGALY

LYMPHADENOPATHY
Images. cont
Conclusions and Teaching Points

➢ Sarcoidosis should be included in the differentials for patients presenting with severe hypercalcemia, generalized lymphadenopathy, hepatosplenomegaly, and AKI.
➢ Sarcoidosis can involve all organ systems to a varying extent and degree
➢ Up to 30 percent of patients present with extrapulmonary sarcoid
➢ Diagnosis is made by histopathology demonstrating noncaseating granulomas, exclusion of other causes of granulomatous histopathology with special stains for mycobacteria and fungi, documentation of involvement of at least one additional organ system, and exclusion of other multisystem granulomatous diseases
Conclusions and Teaching Points. Cont.

- Involvement of the lymph nodes, liver, and spleen is common in sarcoidosis.
- Disorders related to calcium metabolism are the most common renal and electrolyte abnormalities observed among patients with sarcoidosis. This can cause AKI and nephrolithiasis.
- First line treatment is prednisone 1 mg/kg/day for 6 to 12 weeks, with a slow taper thereafter to a maintenance dose of 10 to 20 mg for an additional six to nine months.
- Second line agents are: methotrexate (MTX), azathioprine, leflunomide, mycophenolate, and Tumor necrosis factor-alpha (TNF-a) antagonists.
References:

A 30-year-old female is referred to you by a local optometrist after she was treated several times for anterior uveitis. You are concerned about an associated systemic disease. She feels well otherwise, and denies back or joint pain, rash, cough, or fever. A chest radiograph reveals enlarged mediastinal lymph nodes.

Which one of the following is most likely to be associated with her recurrent uveitis?

A) Cat-scratch disease
B) Lyme disease
C) Sarcoidosis
D) Syphilis
E) Tuberculosis
A 24-year-old asymptomatic female has a chest radiograph that incidentally shows bilateral hilar adenopathy. Additional evaluation supports a diagnosis of sarcoidosis. Which one of the following would be most appropriate at this point?

A) Monitoring only
B) Treatment with corticosteroids
C) Treatment with methotrexate
D) A transbronchial lung biopsy