Cholecystitis, A Rare Presentation For Diffuse Eosinophilic Granulomatosis With Polyangiitis

***Nikhil Seth* MD**

Baylor Scott & White Medical Center, Internal Medicine, Temple, Texas 76504

Objectives

- To expand upon the differential diagnosis of abdominal pain
- To review unique pathology
- To promote further eosinophilic granulomatosis with polyangiitis education

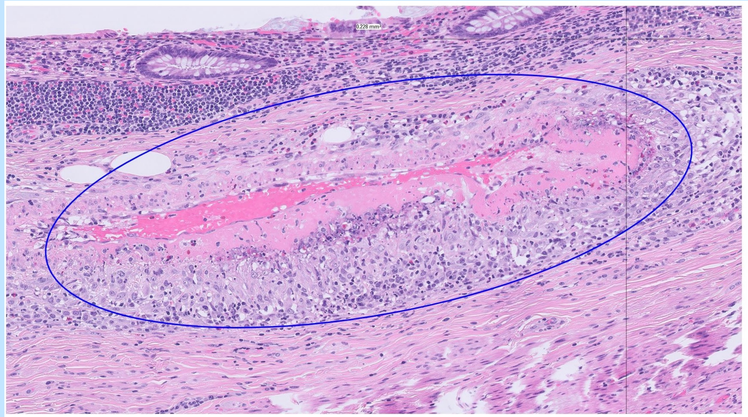
Introduction

- Eosinophilic granulomatosis with polyangiitis (EGPA) is a rare disease with an incidence of 1-3 cases per 100,000.
- It results from small to medium vessel vasculitis driven by eosinophil rich inflammation and anti-neutrophil cytoplasmic antibodies
- It usually manifests with airway inflammation, followed by tissue damage in the lungs and digestive tract
- Gastrointestinal involvement has been seen in roughly 50% of patients, but involvement of the gallbladder is very rare
- Our case highlights a unique scenario of cholecystitis leading to an official pathological diagnosis of EGPA.

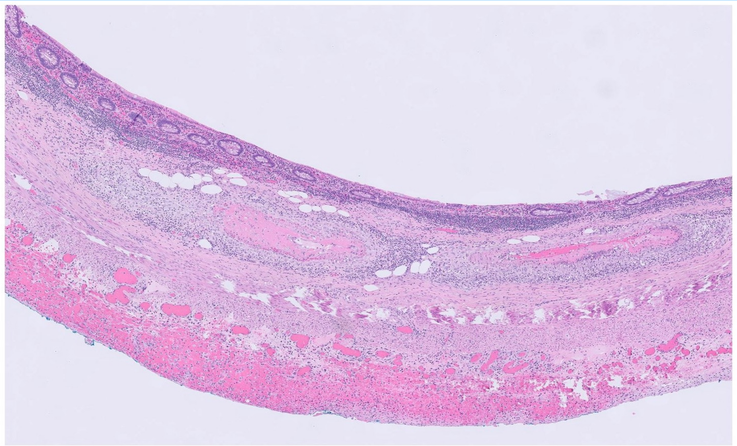
Patient Presentation

- 17-year-old female with a history of asthma presented for two weeks of nausea, vomiting, abdominal pain, decreased urinary output, and 20 pound weight loss.
- PMHx/PSurgHx: Asthma
  - Social Hx: Negative
- Physical Examination
  - Ill appearing female with generalized abdominal tenderness to palpation
- Labs
  - Wbc 33.3, granulocytes 10.46, eosinophils 17.44.
  - ESR 78, CRP 65.6, UA showed 20-50 RBC.
- Imaging
  - Renal US was done to evaluate for pyelonephritis but found slight thickening of the gallbladder wall and biliary sludge.
- She was started on ceftriaxone and monitored.

Figures



Gallbladder with eosinophilic vasculitis



Appendiceal Vasculitis

Brief Hospital Course

- Cholecystectomy was done due to her clinical picture
- Despite elevated WBC and eosinophils, she was discharged as her symptoms improved
- Gallbladder pathology returned and showed necrotizing vasculitis with fibrinoid necrosis.
- There was also marked eosinophilia concerning for EGPA and positivity for ANCA.
- At follow up, she acutely developed profound weakness in the right upper and bilateral lower extremities.
- She was re-admitted for EGPA related peripheral vasculitis neuropathy.
- Despite being started on steroids, she had a long hospitalization.
- She had a bowel perforation, respiratory failure, seizures and glomerulonephritis requiring multi-disciplinary approaches to treatment.
- Ultimately, she stabilized on a combination of antibiotics, high dose steroids, and Cytoxan.
- She was discharged to follow up.

Discussion

- EGPA involving the gallbladder is extremely uncommon
- As blood vessel inflammation and eosinophilic proliferation are the foundation of illness, any organ system can be involved.
- Lung involvement with an asthma equivalence is usually the initial presentation, but patients with intestinal involvement, nausea, vomiting and perforation can be seen, and biliary involvement can present as a cholecystitis picture.
- This case provides a degree of educational value for everyone.
- Early recognition is important as a multi-specialty approach is crucial, and early immunosuppressive therapy can prevent escalation of disease.