A Case of Painful Palpable Purpura

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History

• 43 y.o. AAF presents with a 3 day history of painful purpura initially on her bilateral lower extremities, now with smaller lesions on her nose, arms, and ears.

• Otherwise in usual state of health apart from a dental infection several weeks prior for which she took a partial course of penicillin.

• She experienced similar lesions once before several years prior, but much less extensive, and resolved without medical treatment.
Past Medical History

- Sarcoidosis
- Chronic Anemia
- Severe menorrhagia
- Pre-Eclampsia
- Gestational Diabetes
- Polysubstance abuse

Medications

- Ferrous Sulfate 325mg BID
- Vitamin C 500mg Daily

Allergies

- NKDA

Family History

- Mother- MI @54
- Sister- Sarcoidosis
- DM2, Drug Abuse

Social History

- Denies EtOH
- Tobacco Use
- Crack Cocaine Use
Physical Exam

- T: 98.0°, HR: 110, BP: 91/58, R: 18, 100% on RA
- General: Visibly in pain
- Heart: Regular rate, rhythm, no abnormal sounds
- Lungs: Clear
- Abdomen: Soft, nontender, normal bowel sounds
- Psychiatric: Oriented, normal mood/affect
- Neuromuscular: No focal deficits, but unable to ambulate due to lower extremity pain
- Skin, extremities...
Physical Exam
Physical Exam
Questions?
Differential Diagnosis for painful palpable purpura

- **Vasculitis**
  - Leukocytoclastic Vasculitis
  - Henoch-Schönlein Purpura
  - Granulomatosis with polyangiitis, Churg-Strauss

- **Infectious**
  - Sepsis, DIC
  - Meningococcemia

- **Autoimmune**
  - Antiphospholipid syndrome

- **Drug-Induced**
  - Antibiotics
  - Warfarin Necrosis

- **Hematologic**
  - Thrombocytopenia
  - DIC

- **Coagulopathy**
  - Von Willebrand’s
  - Supratherapeutic anticoagulation
  - Liver Disease

- **Trauma**
Admission Labs

Seg: 65
Band: 14
Lymph: 15
Mono: 4
Baso: 2
Retic: 3.8

Ca: 9.0
Phos: 3.7
Mg: 1.7
Ven Lactate: 2.5

UA: Large Leuks, Nitrite Neg, Prot 100,
RBC 35, WBC 139, 4+ Bacteria
Initial hospital course

- Initially suspected Leukocytoclastic vasculitis, started IV Methylprednisolone
- Levofloxacin for suspected UTI vs. CAP
- Concern for developing compartment syndrome, surgery consulted.
- Patient endorsed that she had been clean from cocaine until 4 days prior to admission

Levamisole Induced Necrosis Syndrome
Levamisole

- Immunomodulatory agent
- Used as a chemotherapy regimen prior to 2000
- Antihelminthic: Still used in veterinary medicine as a livestock dewormer
- Antidepressant qualities, possible stimulant effects
- Cocaine Adulterant. In 2011, found in 82% of DEA cocaine seizures. Difficult to test on the street, mimics cocaine in appearance, possible neuro-excitatory effects.

- Levamisole Induced Necrosis Syndrome / Levamisole Induced Pseudovasculitis
Levamisole Necrosis
Levamisole-Induced Necrosis Syndrome

- Retiform purpura, Skin Necrosis, Hemorrhagic bullae
- Generalized malaise, fatigue, arthralgias
- Leukopenia, neutropenia, agranulocytosis, hyponatremia
- Pulmonary hemorrhage, renal failure, seizures
- Positive ANA, PR3, ANCA, dsDNA, LupusAC, Antihuman elastase
- UDS + Cocaine, occasionally + for Levamisole by GC/MS
Additional Course

• IV Methylprednisolone with extended taper
• Extensive surgical debridements of legs with recurrent infections and repeat admissions
• Skin grafting of legs, auto-amputation of nose
• 11 months later... She has remained clean from cocaine use, without recurrence of purpura or necrosis
In Conclusion…

- This case highlights an interesting and not frequently seen physical exam finding
- As always, history is crucial!
- Levamisole-Induced Necrosis Syndrome: An increasingly prevalent clinical entity
THANK YOU!

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RICHARD O’NEAL, MD
Mild Bihilar prominence is seen in this patient with known hilar and mediastinal adenopathy.

Nodular density in RLL, recommend follow-up PA/Lat once acute illness resolves.
Admission Labs and Studies

2.7  7.7  432
22.9

Seg: 65
Band: 14
Lymph: 15
Mono: 4
Baso: 2
Retic: 3.8

Smear: Marked anisocytosis and poikilocytosis, elliptocytes, dacrocytes. Granulocytopenia with left shift and toxic granulation. Thrombocytosis with large forms. Rule out iron deficiency secondary to blood loss or hemolysis.

125  90  18  105
3.0  24  18  1.8

Ca: 9.0
Phos: 3.7
Mg: 1.7
Ven Lactate: 2.5

T\text{bili}: 1.3
T_{\text{prot}}: 8.1
Alb: 2.4
AST: 31
ALT: 17
AP: 143

Ferritin 1245
Iron 14
Transferrin 147
TIBC 219
Folate 4.2
B12 1460
Smear: Marked anisocytosis and poikilocytosis, elliptocytes, dacrocytes. Granulocytopenia with left shift and toxic granulation. Thrombocytosis with large forms. Rule out iron deficiency secondary to blood loss or hemolysis.

Ca: 8.8
Mg: 1.7
T_bili: 0.3
T_prot: 7.6
Alb: 2.6
AST: 11
ALT: 11
AP: 104
CK: <7

Ferritin 1245
Iron 14
Transferrin 147
TIBC 219
Folate 4.2
B12 1460
• Cutaneous Vasculopathy Associated with Levamisole-Adulterated Cocaine. Tran, H. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3573092/