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Not Every Rash is an Allergy

Sashi N. Nair

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Not Every Rash is an Allergy
Sashi N Nair MD, Indira Brar MD
Department of Medicine Henry Ford Health System, Detroit, Michigan

Abstract

- Syphilis is marked by a myriad of cutaneous manifestations and is often insidious in its late presentation.
- Here we present the case of a 61 year old man with HIV who presented to the infectious disease clinic with an atypical rash, not reporting any current high risk sexual behavior.
- RPR titers and skin biopsy subsequently lead to the diagnosis of secondary syphilis, and the patient was started on Benzathine penicillin treatment.

Presentation and Background

- A 61-year-old HIV+ male presented for regular follow up and complained of a rash.
- HIV History
  - Stable on cART since 1996, no recent OI.
  - Last CD 4 347, Last Viral Load Undetectable
- Past Medical History: Hypertension, CAD s/p CABG, Myelofibrosis, and a solitary renal nodule.
- Family History: No known familial diseases
- Allergies: No known food or drug allergies
- Social History:
  - Been in Eastern Europe, Lives in Michigan working in an office based setting. No tobacco or drug use, social alcohol use.
- Medications
  - Dolutegravir 50mg once daily
  - DESCovy (Emtricitabine-Tenofovir Alafenamide 200-25) once daily
  - Losartan 100mg once daily
  - Metoprolol Succinate 50mg once daily
  - Aspirin 81mg once daily
  - Atorvastatin 40mg nightly

History of Rash

- Three months prior to evaluation he began to develop intermittent fevers with drenching night sweats.
- Fevers would occur primarily at night
- Patient had no other symptoms but was empirically treated for pneumonia by a walk in clinic and received a course of Azithromycin without change in his symptoms
- Subsequently one month prior to evaluation he developed a rash which started on his back and was non-painful and non-pruritic, it spared his face and extremities.
- At the same time he was noted to have submental lymphadenopathy and was treated for sinusitis with Amoxicillin
- He denied high risk sexual encounters or travel

Physical Exam

- Afebrile and hemodynamically stable
- Cardiac and respiratory exams unremarkable
- Abdomen notable for known moderate splenomegaly
- 1 cm non-tender, firm submental lymph-node noted on exam
- A Morbilliform rash was noted on the trunk and shoulders, was blanchable, and consisted of erythematous papules, macules and plaques (see image)

Differential

- Noninfectious
  - Leukemia cutis,
  - Extramedullary hematopoiesis
  - Drug eruption
  - Dermal hypersensitivity
  - Vasculitis
- Infectious
  - Viral Exanthem
  - Milliary Tuberculosis
  - Syphilis

Lab Results

<table>
<thead>
<tr>
<th>Lab Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete Blood Count and Basic Metabolic Profile</td>
<td>All Values within normal limits</td>
</tr>
<tr>
<td>Treponemal IgG/IgM</td>
<td>Positive</td>
</tr>
<tr>
<td>RPR</td>
<td>Positive 1:256 (prior non reactive)</td>
</tr>
</tbody>
</table>

Skin Biopsy: There is a superficial and deep lymphoplasmacytic infiltrate. Stain results reveal Spirochetes in dermis

Course

- He was diagnosed with secondary syphilis and treatment with with Benzathine Penicillin was begun.
- Four hours after the first Benzathine Penicillin injection he developed fevers, chills, diaphoresis and a headache. He presented to the ER
- In the ER he was noted to be febrile, hypotensive and the rash was worse. His blood counts were normal. Based on the timing and type of symptoms he was correctly diagnosed with a Jarisch-Herxheimer reaction (JHR), received supportive management and his symptoms improved.

Discussion

- Secondary syphilis is marked by a myriad of clinical manifestations, typically a maculopapular rash, condyloma acuminata, fevers, and lymphadenopathy [1]
- JHR is a clinical syndrome seen after antimicrobial therapy for spirochetal infections. It is seen in around 30% of HIV positive patients being treated for syphilis [2]
- Risk factors for development of JHR include [2]
  - Higher spirochetal load
  - Higher RPR titers
  - Younger age
  - First time penicillin therapy for syphilis
- This case highlights the importance of recognizing JHR, that may develop after receipt of Penicillin. The correct differential diagnosis between JHR and penicillin allergic reaction is important because the incorrect allergy diagnosis may cause interruption of treatment, leading to a poor outcome

References