Disseminated Nocardia farcinica Masquerading as Low Back Pain

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Introduction

Nocardiosis is a life-threatening infection that can disseminate to any organ and is often refractory to treatment. The infrequency of Nocardiosis and its nonspecific clinical presentations often make it a formidable diagnostic challenge.

Case Presentation

A 79-year-old man with myelodysplastic syndrome presented with worsening back pain over a four week duration, unintentional 30lb weight loss, and hemoptysis.

Past Medical History: HTN, CAD

Social History: lives on a farm with alpacas

Allergies: Sulfa: angioedema

Table 1: Vital Signs

<table>
<thead>
<tr>
<th>Temp(°C)</th>
<th>Pulse</th>
<th>Resp. Rate</th>
<th>Blood Pressure</th>
<th>SpO2</th>
</tr>
</thead>
<tbody>
<tr>
<td>35.5</td>
<td>86</td>
<td>18</td>
<td>118/76</td>
<td>97</td>
</tr>
</tbody>
</table>

Physical Exam:

General: cachectic, awake

HEENT: superficial ulcer superior to left maxillary canine tooth

Heart: S1 S2, regular, no murmurs

Lungs: no wheezes or rhonchi

Abdomen: Soft, non-distended, non-tender

Neuro: No focal neurologic deficits

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Abdomen: Soft, non-distended

Lungs: no wheezes or rhonchi

Table 2: CBC

<table>
<thead>
<tr>
<th>WBC</th>
<th>25.4 K/uL</th>
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<tbody>
<tr>
<td>Hemoglobin</td>
<td>8.0 g/dL</td>
</tr>
<tr>
<td>Hematocrit</td>
<td>24.1%</td>
</tr>
<tr>
<td>Platelets</td>
<td>118 K/uL</td>
</tr>
</tbody>
</table>

CT Spine:

1. Soft tissue mass extending to the left L5-S1 neural foramen

CT Thorax:

1. Pulmonary micronodules distributed diffusely in a military pattern in bilateral lungs

Blood Culture: Nocardia farcinica

Gram stain showing Gram positive, branching, beaded, filamentous rods (partially acid fast with modified Kinyoun stain)

Microbiology:

- Aerobic gram positive filamentous branching rod
- Stains weakly with modified Kinyoun stain

Epidemiology:

- Found in soil and decaying vegetables
- Transmitted via dust particles
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- Aerobic gram positive filamentous branching rod
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Discussion

- Aerobic gram positive filamentous branching rod
- Stains weakly with modified Kinyoun stain

Hospital Course:

- Started on imipenem, linezolid, and ciprofloxacin
- Allergy/Immunology consult for TMP-SMX desensitization (declined by family)
- Goals of care conversation - comfort care

Conclusion

Nocardiosis is a rare infection that often involves skin, lungs and CNS. Our patient presented with low back pain and was found to have Nocardia bacteremia, which is extremely rare, as well as brain abscesses, lung infection and soft tissue mass at L5-S1. This highlights the importance of prompt clinical suspicion and treatment of disseminated Nocardiosis.

References