A Great Imitator Presenting as Crescentic Glomerulonephritis with Membranous Features

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Background

The CDC reported 176,713 cases of syphilis in 2021. The rate of primary and secondary syphilis has remained almost every year since reaching a historic low in 2000 and 2001. Most cases of syphilis occur in men; majority of men who have sex with men (MSM). MSM are disproportionately affected by syphilis; 53% of all male FSU syphilis cases in 2020.

Renal manifestations of secondary syphilis include:
- diffuse endocapillary glomerulonephritis, sometimes with crescents
- nephrotic syndrome
- mild transient albuminuria

Case description

43-year-old male presented with:
- 3-month history of non-specific abdominal and joint pain
- 3-week history of truncal pain
- Recently diagnosed hypertension

Physical exam:
- generalized abdominal tenderness
- generalized lymphadenopathy

Laboratory results:

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>C3 and DAT IgG</td>
<td>positive</td>
</tr>
<tr>
<td>Cryoglobulin</td>
<td>negative</td>
</tr>
<tr>
<td>CPK</td>
<td>normal</td>
</tr>
<tr>
<td>HLA B27, antibodies, SPEP, proteinuria</td>
<td>normal</td>
</tr>
<tr>
<td>Creatinine</td>
<td>2.14 mmol/L</td>
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<tr>
<td>WBC</td>
<td>3.9×10⁹/L</td>
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<tr>
<td>Hemoglobin</td>
<td>12.9 g/dL</td>
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Kidney biopsy:

- Crescentic glomerulonephritis with membranous features
- Findings suspicious for lupus nephritis with near full house immunofluorescence

Hospital course

- Initially treated with IV daily methylprednisolone. Creatine trended down.
- On day 3 of steroids, dramatic generalized maculopapular, erythematous rash
- Further analysis of his sexual history revealed he had unprotected intercourse with men over the past few months.
- RPR and Treponema pallidum antibodies tests obtained - positive, titers 1:64
- Intravenous ceftriaxone discontinued
- Initiated on IV penicillin G 2,000,000 units 8-hourly for a total of 6 doses following which his symptoms improved remarkably.
- Plan at discharge outpatient IM benzathine penicillin G 2,400,000 units weekly for 3 weeks.

Unfortunately, patient was lost to follow up.

Treatment

- A literature review by Inayat et al. [2020] reported 19 cases between 1989 and 2020 in which renal manifestations of syphilis resolved after treatment with penicillin.

Conclusions

- None reported included
- Treatment penicillin IM 600 000 U daily for 14 days
- Benzathine penicillin G 2,400,000 units IM weekly for 3 weeks
- Intravenous benzathine penicillin (3 g every 4 hours)
- Azathioprine for 14 days
- Penicillin G, 2,400,000 units IM

References

- https://uptodate.com/contents/syphilis
- https://www.expertconsult.com/contents/syphilis/epidemiologypathophysiologyandclinicalmanifestationsinpatientswithwithout/herpesabdominalcysticfibrosis/53746/15856
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