An atypical case of Neurosyphilis – the Great Pretender is back

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Why is this important?
“Please review this gentleman who has had pain and numbness in the right lower limb…”

- 31 year old man
- Gradual onset of symptoms over one year
- Right lower limb pain and numbness
- Sphincter involvement
- Cognitive difficulties
Social and sexual history

- Lithuanian, moved to Scotland 9 years ago
- One monogamous sexual relationship in the past 11 years
- No intravenous/recreational drug misuse
- No sexual contact with men
- Works as fish filleter
- Left school age 18
- No family history of syphilis/neurological disorders
Examination

- Cardio/resp/abdo: unremarkable
- No rashes/skin lesions/chancre

Neuro:
- Thinning of right quadriceps
- Tone NORMAL, Power NORMAL
- Reduced left knee jerk, absent right knee jerk, absent bilat ankle jerks, absent distal vibration sense
Investigations

- Serology
- CSF
- MRI head (during treatment and six months later)
- MRI spine
- Nerve conduction studies (post-treatment)
- Cognitive testing
- ECHO, ECG
- CXR

HIV NEGATIVE
<table>
<thead>
<tr>
<th>Date</th>
<th>Syphilis antibody EIA</th>
<th>T pallidum particle agg TPPA</th>
<th>Treponema pallidum IgM EIA TP</th>
<th>RPR</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/9/18 (clinic)</td>
<td>POSITIVE</td>
<td>POSITIVE</td>
<td>Negative</td>
<td>1:4</td>
</tr>
<tr>
<td>21/9/18 (admission)</td>
<td>POSITIVE</td>
<td>Not tested</td>
<td>Negative</td>
<td>1:8</td>
</tr>
<tr>
<td>31/10/18 (post-treatment)</td>
<td>POSITIVE</td>
<td>POSITIVE</td>
<td>Negative</td>
<td>1:4</td>
</tr>
<tr>
<td>17/6/19 (follow-up)</td>
<td>POSITIVE</td>
<td>POSITIVE</td>
<td>Negative</td>
<td>1:2</td>
</tr>
<tr>
<td>CSF parameters</td>
<td>In HIV-negative individuals</td>
<td>In HIV-positive individuals</td>
<td></td>
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<tr>
<td>WBC</td>
<td>&gt; 5 µL</td>
<td>&gt; 20 µL OR 6–20 µL (on ART/plasma HIV VL undetectable, or blood CD4 &lt; 200)</td>
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<tr>
<td>Protein</td>
<td>&gt; 0.45 g/l</td>
<td>&gt; 0.45 g/l</td>
<td></td>
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<tr>
<td>RPR/VDRL</td>
<td>+</td>
<td>+</td>
<td></td>
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<tr>
<td>TPPA</td>
<td>&gt; 1:320</td>
<td>&gt; 1:320</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td>Cell count per µl</td>
<td>Protein mg/ml</td>
<td>Glucose (CSF/plasma)</td>
<td>Oligoclonal bands</td>
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<td>------------------------------------------------</td>
</tr>
<tr>
<td>2/10/18</td>
<td>88 WBC ↑</td>
<td>1.15 ↑</td>
<td>3 / 4.4</td>
<td>Some paired and unpaired (inflammatory pattern)</td>
</tr>
<tr>
<td></td>
<td>11680 RBC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17/10/18</td>
<td>2 WBC (N)</td>
<td>0.45 (N)</td>
<td>3.3 / 5.3</td>
<td>Some paired and unpaired (inflammatory pattern)</td>
</tr>
<tr>
<td></td>
<td>788 RBC</td>
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</tr>
</tbody>
</table>
MRI spine
Treatment

- Benzyl Penicillin 2.4g IV 4 hourly for 2 weeks, prednisolone 60mg OD for 3 days
- Catheterisation
- Physiotherapy
MRI head before and after

Right amygdala lesion
Diffuse cortical atrophy
After treatment

- Improvement in cognitive symptoms
- Improvement in cauda equina symptoms
- Successfully decatheterised
- Back to work
What happens next?

- Annual neurology follow-up
- Repeat lumbar puncture and consider further treatment with doxycycline
- Follow-up with neuropsychologist in Sept 2019
Learning points

- Test for syphilis in cases with abnormal neurological presentations
- Neurosyphilitic symptoms may not fully improve
- We still don’t understand everything about syphilis!
Questions?

Pickup lines are very different in the medical community.
References

