A 52-year-old, HIV-negative woman presented with one year of bilateral painless central vision loss that worsened over 3 months. A medical examination revealed Argyll Robertson pupil (i.e., accommodates but does not react to light). Single-read next-generation sequencing (NGS) of the CSF identified 89 sequence reads corresponding to Treponema, elevated CSF protein, pleocytosis, negative antiaquaporin-4, antimyelin oligodendrocyte glycoprotein antibody levels, retinal nerve fiber layer thinning, and bilateral nerve sheath thinning.

Optical coherence tomography of the retinal nerve fiber layer (RNFL) revealed bilateral thinning (A). Fundus angiography was unremarkable (B).
enhancement (Figures 1–2). The patient received penicillin and oral prednisolone, which improved her vision. Infectious causes of optic neuritis are complex (Table). NGS is an emerging method with the potential to rapidly identify atypical optic neuritis.

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**Disclosure**

The authors report no disclosures relevant to the manuscript. Go to Neurology.org/N for full disclosures.

### Table Common Pathogens of Infectious Optic Neuropathies

<table>
<thead>
<tr>
<th>Pathogen Type</th>
<th>Pathogens</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Viral</strong></td>
<td>Herpes simplex virus, Epstein-Barr virus, chikungunya virus, dengue virus, influenza viruses, mumps virus, varicella-zoster virus, cytomegalovirus, human immunodeficiency virus, measles virus, Rift Valley fever virus, rubella virus, zika virus, West Nile virus</td>
</tr>
<tr>
<td><strong>Bacterial</strong></td>
<td><em>Treponema pallidum</em>, <em>Mycobacterium tuberculosis</em>, <em>Bartonella henselae bacterium</em>, <em>Rickettsii</em>, <em>bacterium Borrelia burgdorferi</em>, Leptospires, Tropheryma whippelii, <em>Mycobacterium leprae</em>, <em>Bacillus genus</em></td>
</tr>
<tr>
<td><strong>Fungi</strong></td>
<td><em>Cryptococcus neoformans</em>, <em>Mucorales</em></td>
</tr>
<tr>
<td><strong>Parasites</strong></td>
<td><em>Toxoplasma gondii</em>, <em>Toxocara canis</em>, <em>Toxocara cati</em>, <em>Plasmodium</em>, <em>Nematodes</em>, <em>Onchocerca</em></td>
</tr>
</tbody>
</table>

Note: All pathogens listed in the table can be detected through next generation sequencing.
Appendix (continued)

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Contribution</th>
</tr>
</thead>
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<tr>
<td>Qiang Li</td>
<td>Shenzhen People's Hospital (The Second Clinical Medical College, Jinan University, The First Affiliated Hospital, Southern University of Science and Technology), Shenzhen, China</td>
<td>Major role in the acquisition of data</td>
</tr>
<tr>
<td>Xuejun Fu</td>
<td>Shenzhen People's Hospital (The Second Clinical Medical College, Jinan University, The First Affiliated Hospital, Southern University of Science and Technology), Shenzhen, China</td>
<td>Major role in the acquisition of data and study concept or design</td>
</tr>
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<td>Drafting/revision of the manuscript for content, including medical writing for content, major role in the acquisition of data, study concept or design, and analysis or interpretation of data</td>
</tr>
</tbody>
</table>

References

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