**BACKGROUND**

Norovirus is one of the genera of the Calicivirus family there are five Known genogroups (GG I through V). It is one of the most common causes of gastroenteritis in both children and adults. Neurologic complications such as febrile seizures are rare, although more frequent than observed with infections with other enteric virus, such as rotavirus. Norovirus-associated encephalopathy is presumably rare, but has been reported twice.1,2

There is one reported case of encephalitis associated with positive PCR for norovirus in CSF.2

Other cases described presented with seizures or encephalopathy associated with negative CSF PCR for norovirus. There was a marked increase in CSF cytokines, underlining the significance of inflammatory response versus direct nervous system invasion.1

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**CASE PRESENTATION**

- **IDENTIFICATION:** 12 months of age
- **PAST HISTORY:**
  - Pneumonia diagnosed 3 weeks before presentation (amoxicillin and clavulanic acid, followed by clarithromycin)
  - Failure to thrive
- **PRESENTATION:**
  1. Diarrhea (3 weeks before admission)
  2. Vomiting (3 days before admission)
  3. Convergent strabismus (day of admission)
  4. Imbalance (day of admission)
  5. Tonic simple generalized seizure which lasted for 1 minute (day of admission)

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**WORKUP**

**LABORATORY TESTS**

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
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</thead>
<tbody>
<tr>
<td>Hb</td>
<td>10.9 g/dL</td>
</tr>
<tr>
<td>Leukocytes</td>
<td>11,200/µL</td>
</tr>
<tr>
<td>CRP</td>
<td>0.11 mg/dL</td>
</tr>
<tr>
<td>Immuneoelctrop Rhesis</td>
<td>Negative</td>
</tr>
<tr>
<td>CSF</td>
<td>5.6 cells/µL, 100% lymphocytes, glychorrhachia 80 mg/DL (glycemia 82 mg/dL) proteinorrachia 154 mg/dL</td>
</tr>
<tr>
<td>CSF IL-6</td>
<td>5.8 pg/mL (NORMAL)</td>
</tr>
</tbody>
</table>

**EEG**

Rare paroxysms located to the vertex

**IMAGING STUDIES**

- Normal head CT (1st day of admission)
- MRI (4th day of admission)

**MICROBIOLOGY**

- Blood cultures NEGATIVE
- CSF culture NEGATIVE
- Urine culture NEGATIVE
- Serology for Mycoplasma NEGATIVE
- Western blot for *Borrelia* NEGATIVE
- Stool RT PCR for norovirus POSITIVE

**CONSULT**

- ACYCLOVIR + CIPROFLOXACIN + CEFTRIAXONE
- PHENYTOIN

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**REFERENCES**


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**COMMENTS**

Here we present a case of a norovirus infection, associated with encephalopathy, with a normal neurological outcome and normal cytokine levels in CSF, unlike previously described in some reports.2 Similarly to a previous report, norovirus was not found in CSF samples.2 Attending to the progressive emergence of this agent across the world, further studies are needed to clarify its pathogenicity and relevance in encephalopathy cases.1