# Study, read, learn, be a bit lucky and save money: think of Parechovirus!

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## Symptoms to Diagnosis

<table>
<thead>
<tr>
<th>CASE 1</th>
<th>CASE 2</th>
<th>CASE 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preterm newborn boy</td>
<td>Term newborn girl</td>
<td>Term newborn girl</td>
</tr>
<tr>
<td>22 days old, 36 SA corr age</td>
<td>5 days old</td>
<td>6 days old</td>
</tr>
<tr>
<td>No luck</td>
<td>No knowledge</td>
<td>Knowledge</td>
</tr>
<tr>
<td>Good thinking</td>
<td>Luck</td>
<td></td>
</tr>
<tr>
<td>~ 12 days from symptoms to diagnosis</td>
<td>1 day from symptoms to diagnosis</td>
<td>2 days from symptoms to diagnosis</td>
</tr>
</tbody>
</table>

## Clinical Manifestations

- Fever
- Irritability, hypotonia
- Tetraparesis syndrome

- Central apnea
- Central apnea

## Labs

- CBC: normal, no inflammatory syndrome
- Blood culture: normal
- CSF analysis and culture: normal

## EEG

- Unexpected finding by clinician who discovered an HPeV RT PCR + on LP microbiology sheets from a new lab kit

## CSF

- Microbiological screening
- Guthrie (3x)
- Genetic analysis
- Fundoscopy
- Multidisciplinary meeting confirmed suspicion of HPeV (HPeV RT PCR + a few days earlier) on basis of clinical course and brain MRI findings

## Evolution

- Hemiparesis left, related to antenatal stroke lesion right, discovered at postnatal MRI
- Good at 9 mo
- Good at 9 mo

## Literature Facts about HPeV

- Non-enveloped, single-stranded RNA virus, family Picornaviridae.
- Throughout the year but seasonal variation (mostly summer, autumn)
- Transmission: fecal-oral and respiratory routes, often by older siblings
- Seroprevalence peaks at 70-90% at 2 years.
- HPeV3: severe disease, especially, common cause of viral meningitis in neonates and young infants
- CSF cytological typically shows no or minimal abnormalities
- MRI shows typically white matter abnormalities, sometimes extensive (high signal intensity and punctate lesions)
- Management is supportive
- Long term neurologic sequelae are mostly unknown

## Take Home Messages

- Get better: you can be helped by new technologies. CSF broad RT PCR analysis can point out unsuspected pathogens and should therefore be done routinely.
- Think faster: learning from literature and experience can make us save time, worries, money and pain.
- Remember: HPeV should be part of the differential diagnosis for any neonate or infant presenting with fever, irritability, rash, sepsis like symptoms. It is not rare and now well-documented

## References