



Parechovirus develops normocellular meningitis; retrospective analyses from 33 cases of meningitis/encephalitis confirmed by multiplex PCR.

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Background

A multiplex PCR can detect causable pathogen within an hour regardless of cerebrospinal fluid (CSF) cell count.

Method

To show the correlation between CSF cell count (CCC) and pathogen derived from CSF samples among patients with meningitis/encephalitis. Tokyo Medical University Hachioji Medical Center is a 610-beded tertiary care hospital.

A retrospective analysis was conducted on CSF samples obtained from patients with meningitis/encephalitis, using the Film Array Meningitis/Encephalitis Panel (FA-M/E :BioMérieux Japan) from April 2023 to March 2024.

Information on the patient's age, gender, underlying disease, pathogen from CSF, CSF cell counts (CCC), CSF protein, and clinical outcome were collected.

Results

33 cases were included; median age was 28.9 years (range:0-90). 57.6% were under 10 years old.

The types of pathogens were

Virus 78.8%, Bacteria 12.1%, and Fungus 9.1%.

The three most common pathogens were

- Enterovirus (EV) 23.5%,**
- Human parechovirus(HPeV) 20.6%,**
- Varicella zoster virus (VZV) 17.6%.**

Median CSF cell counts were 232.2(1-2160)/ μ L.

The CCC in HPeV 2.2(1-3)/ μ L were significantly lower than EV 248.2(0-38) / μ L, and VZV 378.5(1-1904) / μ L

by the Mann-Whitney U test ($p < 0.05$).

Conclusions

Low-normal range (LNR) CCC meningitis are known as *cryptococcus meningitis* in PLWH. 1), 2)

Our results revealed that HPeV cause LNR CCC meningitis among infants ≤ 3 month old *. 3)

The Multiplex PCR including FA-M/E can make rapid definitive diagnosis of LNR CCC meningitis/encephalitis.

Even if the CCC is normal range, meningitis/encephalitis cannot be ruled out.

Further investigation is needed.

1) Open Forum Inf Dis, Vol 11, Iss 10, Oct 2024.

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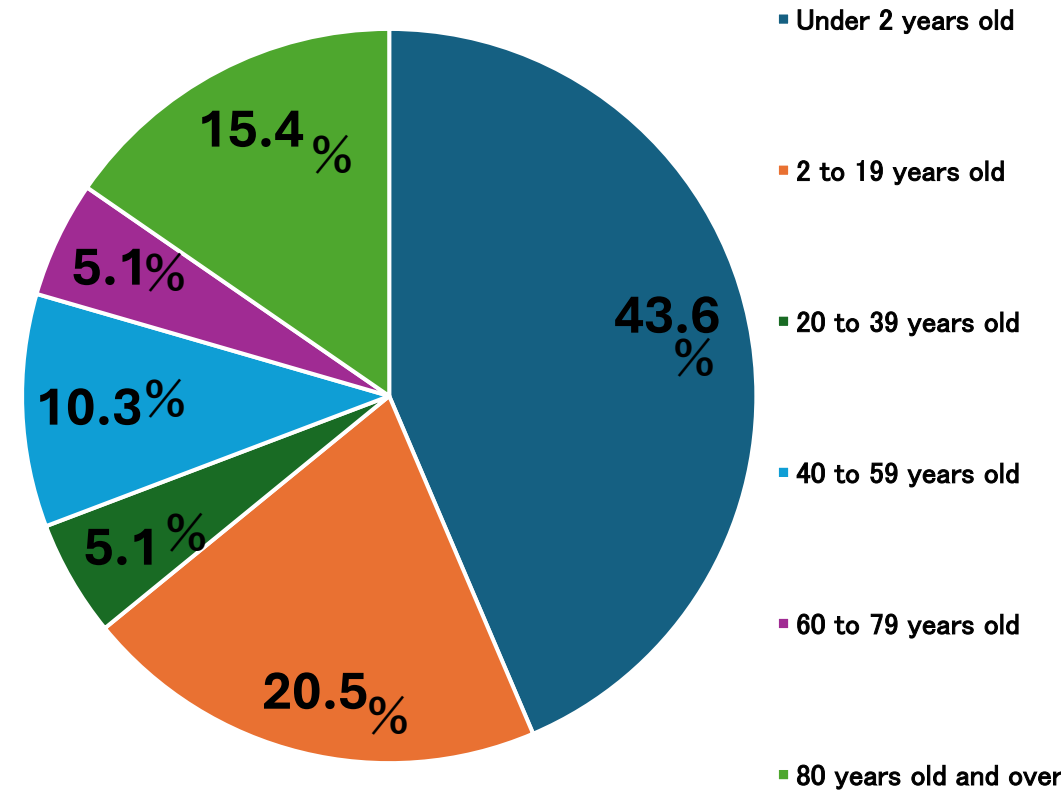
2) Clinical Microbiology ReviewsVolume 36, Issue 4

3) Journal of NeuroVirology (2022) 28:46–51

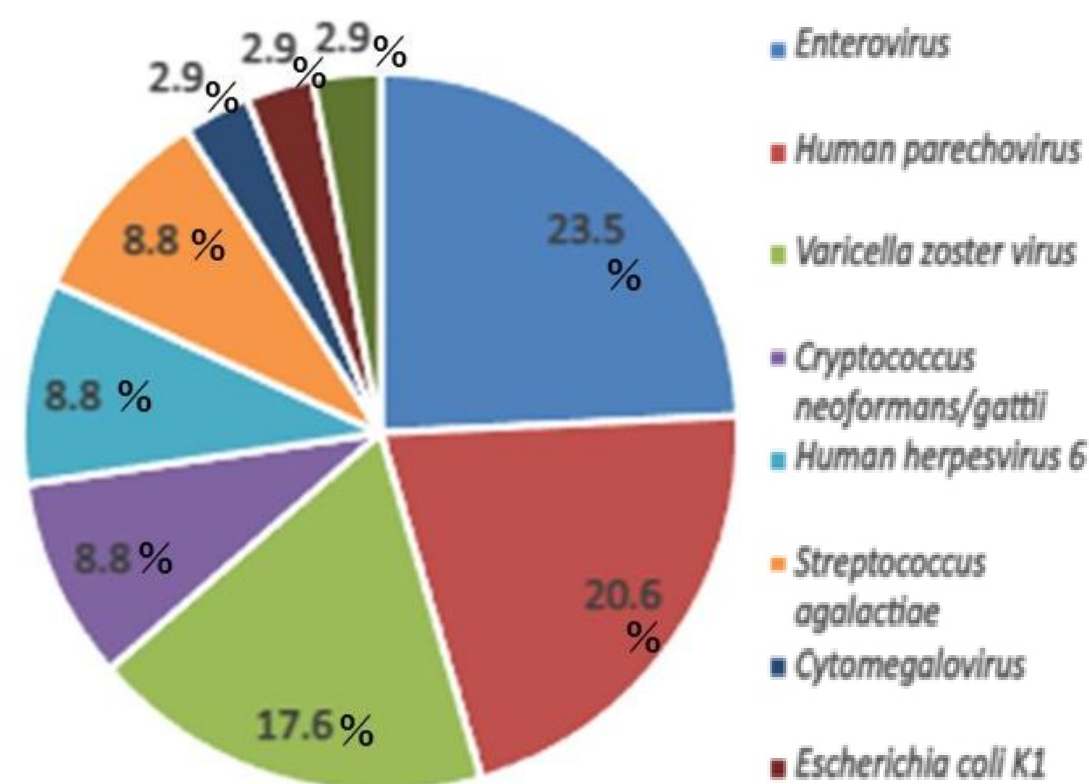
Thank you ขอบคุณ



Age



PCR detection



CSF cell counts (CCC)

