CYTOMEGALOVIRUS INFECTION IN A INFANT WITH VENTRICULOMEGALY
IS IT CONGENITAL OR POSTNATAL?

Background
Differential diagnosis between congenital and postnatal cytomegalovirus (CMV) infection may be challenging and essential for follow-up.

Aims and methods
We describe a case of CMV infection that illustrates the difficulty of correct diagnosis by data collected from patient's hospital file.

CASE REPORT

**Gestation**
- 1st trimester
  - Flu-like syndrome
  - Ultrasound at 24th week: Ventriculomegaly and dilatation of cisterna magna
  - CMV IgG+/IgM-
- 2nd trimester
  - Periventricular calcifications suspected by ultrasound and brain MRI
  - Ventriculomegaly at 2nd trimester
  - Axial hypotonia
  - Splenomegaly (3-4 cm)
  - Anemia (hemoglobin 7.9 g/dL)
  - Thrombocytopenia (34,000/µL)
- 3rd trimester
  - Fetal MRI at 28th week
  - Confirmed findings

**Birth**
- 36 weeks + 4 days
  - Cephalic perimeter > 95th percentile
  - NICU from D1 to D11: clinical sepsis
  - Universal newborn hearing screening normal

**At admission**
- 3-weeks old
  - 45 days
  - Breastfed for the first two weeks
  - Irritability and progressive feeding difficulties
  - Axial hypotonia
  - Splenomegaly (3-4 cm)
  - Anemia (hemoglobin 7.9 g/dL)
  - Thrombocytopenia (34,000/µL)

**Etiologic investigation**
- IgM (1.03 UA/mL) Positive
- IgG (240 UA/mL) Positive
- PCR CMV in urine and blood, Positive
- Viral load 535 copies/ml
- PCR CMV in cerebrospinal fluid negative

**Is it congenital?**
- Maternal antibodies for CMV
  - IgM negative, IgG >250 UA/mL
- Assymptomatic at birth

**Is it postnatal infection?**
- breastfeeding
- IgG patient titers (240 UA/mL) inferior to mother’s (>250 UA/mL)
- CMV IgG positive (193 UA/mL), IgM negative – D17
- Viral load negative
- PCR for CMV-DNA in Guthrie card - negative

**Follow-up**
- M
  - Macrocephaly and mild axial hypotonia
  - Brings both hands to midline, has palmar grasp; babbles
  - Hemoglobin 11.7 g/dL
  - Platelets 300,000/µL

**Clinical improvement**
- No treatment was administered

**Conclusion**
Though some findings were prone to congenital infection, as ventriculomegaly, postnatal infection was supported by CMV maternal serology during pregnancy, no symptoms at birth, breastfeeding, positive PCR for CMV, increased titers of IgM subsequently negative and similar mother/infant CMV IgG ratio. Lately, the diagnosis was confirmed by PCR in Guthrie card.

References
1. Allen, AA, Baquero-Artigao, F. Revisión y recomendaciones sobre la prevención, diagnóstico y tratamiento de la infección postnatal por cytomegalovirus. Anales de Pediatría 2011; 74(1):52.e1-52.e13