



## Cytomegalovirus (CMV) in Pregnancy

**Key Issue:** Cytomegalovirus (CMV) is a virus of the herpes family which infects people of all ages. During pregnancy, primary infection or reactivation can occur with a risk of transmission of CMV to the unborn baby. Currently no vaccine is available to prevent CMV infections, and the only prevention is to reduce the transmission of the virus.

**Case Presentation\*:** Jennifer, a 29 year old G2P1 (1 previous live birth) presents to the antenatal clinic at 20 weeks gestation with an uncomplicated pregnancy to date, with concerns about a recent antenatal scan that showed an abnormal finding of fetal growth restriction (FGR) and an echogenic bowel. She also reports a mild sore throat and general malaise for the past few weeks, which she attributed to the cold weather. On further questioning, Jennifer reveals that her toddler, aged 2, has recently been unwell with a fever and sore throat.

**Diagnostic Workup:** Ultrasound: FGR with fetal weight <10th percentile, mild ventriculomegaly, slightly thickened placenta. Serology: Positive CMV IgG and IgM, recent infection indicated by IgG avidity. CMV PCR of amniotic fluid confirms CMV DNA. Clinical Findings: Mild flu-like symptoms in the mother. Fetal ultrasound suggests congenital CMV infection, likely causing FGR.

**Clinical Focus: CMV in Pregnancy:** CMV is the most common congenital viral infection. Transmission to the fetus typically occurs when a woman acquires a primary infection during pregnancy. In this case, Jennifer's toddler has likely been the source of infection, as CMV is commonly spread via saliva and urine in young children.

\*Scenario based on a fictional clinical incident to maintain confidentiality

### Risk Factors for Congenital CMV:

- Primary CMV infection during pregnancy (as opposed to reactivation or reinfection).
- Close contact with young children, especially those in daycare or preschool settings.

### Possible Fetal Outcomes:

- Intrauterine growth restriction (IUGR)
- Microcephaly
- Hearing loss
- Vision problems
- Developmental delay

### Treatment Options:

- In Queensland, CMV management in pregnancy focuses on close monitoring and antiviral treatment where appropriate.
- Newborns born with congenital CMV infection should be screened for signs of the infection, including hearing tests and blood tests for viral load.

### Key Learnings

Adhering to these strategies, healthcare providers can optimise outcomes for mothers and their babies, reduce the risk of CMV transmission, and manage arising complications effectively.

### Good Practice Points

1. **Early Detection:** Encourage pregnant women, especially those with young children, to seek early prenatal care and CMV serological testing if symptoms suggest primary infection.
2. **Maternal-fetal Medicine (MFM) referral:** Once primary CMV infection in pregnancy is serologically confirmed, complete referral to MFM services, ideally by 16 weeks gestation, as early treatment is more effective in the reduction of transplacental CMV transmission.
3. **Counselling:** Offer counselling for women diagnosed with congenital CMV to discuss risks and outcomes.
4. **Multidisciplinary Approach:** Coordinate care between obstetricians, neonatologists, audiologists, and paediatricians for comprehensive maternal and fetal management.
5. **Community Awareness:** Promote CMV prevention strategies in communities, particularly among families with young children, and women in childcare settings.
6. **Regular Follow-up:** Arrange ongoing visits for women diagnosed with CMV to monitor pregnancy and fetal health.

### Prevention Strategies

- Wash your hands** with warm soapy water before and after preparing food, after feeding a young child, after handling children's toys, after going to the toilet or after changing a child's nappy.
- Wash toys and other surfaces** that come into contact with urine or saliva, with detergent and warm water.
- Children who are unwell** should stay home from childcare or school.
- Do not place a child's dummy/pacifier** into your mouth.
- Do not share a toothbrush** with a young child.
- Do not share food or drinks** or eating utensils with a young child.
- Avoid contact with saliva** when kissing a young child.

### Useful links / References:

- **What you can do to protect your unborn baby from CMV**  
<https://www.childrens.health.qld.gov.au/about-us/news/feature-articles/what-you-can-do-to-protect-your-unborn-baby-from-cmv>

