

Diagnosis of Fetal CMV Infection

Algorithm for diagnosis of congenital CMV infection

Suspected fetal risk of congenital CMV including:

- 1) Positive maternal serology c/w primary maternal infection
- 2) Referral for abnormal US suggestive of CMV (Ventriculomegaly, IUGR, intracranial calcifications, hydrops, echogenic bowel, ascites)^{3,9}

Targeted MFM Ultrasound; amniocentesis for CMV PCR after 20-22 weeks gestational age and ≥ 6 weeks from maternal exposure, or at time of finding of fetal abnormality* ^{1,7}

Declines amniocentesis

Positive amniotic fluid
CMV PCR

Diagnosis of congenital
infection

PPV 100%, Spec 100%⁸

Offer CMV HIG⁵, expectant
management, TOP if gestational
age appropriate
Antenatal testing

CMV HIG protocol

Negative amniotic fluid
CMV PCR

Unlikely congenital CMV,
evaluate other etiologies for
US findings, low risk fetal
infection if negative amnio
after positive maternal serum
screen

NPV of congenital infection–
94.2%⁸ if done between 20-
22 weeks EGA and $\geq 6-8$
weeks after primary maternal
infection⁸

If not done, offer maternal
serology; CMV IgG, avidity

CMV IgG positive

CMV IgG negative

Unlikely congenital CMV,
evaluate other etiologies for
US findings

Avidity < 60 %

Avidity > 60%

Can not exclude
congenital CMV;
offer amnio or
empiric HIG

Congenital CMV
rare

* Diagnostic testing (amniocentesis) recommended for a) primary maternal infection in first ½ of pregnancy or b) US findings consistent with infection (above).

Timing of amniocentesis for best sens/specificity⁸ is 20-22 weeks EGA and > 6-8 weeks after primary maternal infection, or at time of US finding as

- 1) 6-9 weeks required from time of maternal infection to time for virus to be eliminated from the fetal urine and detected in AF,
- 2) maternal infection in first 12-16 weeks carries highest risk of severe disease,
- 3) higher false negative rate due to reduced fetal diuresis earlier than 20 week EGA⁸

Links to other CMV documents:

<u>CMV Screening</u>
<u>HIG Protocol</u>
<u>References</u>

Revised July 27, 2011.

Notification to Users

These algorithms are designed to assist the primary care provider in the clinical management of a variety of problems that occur during pregnancy. They should not be interpreted as a standard of care, but instead represent guidelines for management. Variation in practices should take into account such factors as characteristics of the individual patient, health resources, and regional experience with diagnostic and therapeutic modalities.

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