UNC SCHOOL OF MEDICINE

UNC Center for Maternal & Infant Health

Serologic Testing/Screening for Suspected Maternal CMV Infection In Pregnancy

Algorithm for:

1) Screening for maternal CMV seroconversion in pregnancy
or
2) Potential Maternal CMV exposure
*universal screening not endorsed in US or Canada at this time

Consensus statement from SOCG:
A) Routine screening of pregnant women for CMV by serology testing is currently not recommended. (III-B)
B) Serologic testing for CMV may be considered for women who develop influenza-like illness during pregnancy or following detection of sonographic findings suggestive of CMV infection. (III-B)
C) Seronegative health care and child care workers may be offered serologic monitoring during pregnancy. Monitoring may also be considered for seronegative pregnant women who have a young child in day care. (III-B)[6]

CMV facts: [1,2,6]
Congenital CMV – 0.2-2.2% live births – most common congenital infection
Maternal seroconversion rate in pregnancy 1-4%
Intrauterine transmission
primary infection – 30-40%
secondary infection – 1%
Congenital infection (positive urine < 2 weeks of life)
10-15% symptomatic at birth
85-90% no s/s at birth
5-15% develop sequelae

Risk factors for CMV seroconversion in pregnancy [6]
- Child < 4 years of age in daycare
- Maternal at-risk occupation
  - Health care worker
  - Day care/child care provider
  - Primary school teacher

Obtain maternal serum for screening at:
A) Prenatal care intake
or
B) Time of concern for maternal exposure

If abnormal US findings see CMV diagnosis protocol

Maternal serum CMV IgG, IgM

IgG negative IgM negative

Maternal susceptible *recommend hand washing, other prevention measures[10]

IgG negative IgM positive

Concern for acute, primary maternal infection
50% risk of transmission
10-20% symptomatic at birth

IgG positive IgM positive

IgG Avidity

IgG Avidity > 60 consistent with remote prior exposure (> 4-6 months prior), rare fetal risk

Avidity < 60%, concern for primary maternal infection; avidity < 30% c/w infection < 3 months

IgG positive IgM negative

Presume maternal immunity, very low fetal risk
No further screening; may confirm with avidity (>60% c/w remote exposure) if done after 18 weeks EGA

Repeat maternal serum CMV IgG either:
1) 4-6 weeks after suspected exposure
or
2) at 18-19 weeks EGA if screening in first trimester

IgG negative at 6 weeks, likely low fetal risk

If CMV IgG positive, check CMV avidity

Manage as primary maternal CMV infection
MFM Referral

Links to other CMV documents:

CMV Diagnosis
HIG Protocol
References

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.