

South Australian Paediatric Clinical Guidelines

Epstein- Barr virus (glandular fever) in pregnancy

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Epstein-Barr virus

- > Epstein-Barr virus (EBV) is a human herpes virus with a variable incubation period that may cause infectious mononucleosis
- > Epstein-Barr virus has the ability to remain latent in the body and become re-activated at a later time¹

Clinical features

- > Acute viral syndrome with fever
- > Sore throat
- > Lymphadenopathy
- > Characteristic increase in the percentages of monocytes and lymphocytes (mononucleosis and lymphocytosis)

Incubation period

- > 2 to 7 weeks after exposure

Route of transmission

- > Sharing oral secretions (saliva)

Infection precautions

- > Standard precautions

Literature review

- > EBV has a worldwide distribution. In Australia, EBV is more common among women aged between 15 and 19 years. In developing countries, EBV is more common among children³
- > Primary EBV infection during pregnancy is rare. Only 3.0 % to 3.4 % of pregnant women are susceptible²
- > Only 50 % of pregnant women infected will develop clinical infectious mononucleosis
- > The low frequency of maternal EBV in pregnancy makes it difficult to assess the risk to the fetus
- > Early studies have reported that infants occasionally suffer damage due to maternal primary EBV infection just before conception or during pregnancy
- > In other studies, EBV infection was not transmitted to the fetus and there were no adverse effects
- > The risk of intrauterine transmission of EBV infection is considered to be low, even when the mother is symptomatic clinically^{2,4,6}
- > Reactivation of EBV in pregnancy may carry a small risk of a shortened pregnancy duration and lower birthweight⁷
- > Infection with EBV may be associated with Hodgkin's disease and non-Hodgkin's lymphomas (particularly in the presence of HIV infection) and nasopharyngeal carcinoma

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Diagnosis

- > Recent primary EBV infection is diagnosed by the presence of viral capsid antigens (VCA) IgG and IgM antibodies in the absence of antibodies to EBV-associated nuclear antigen which develop 3 to 4 weeks after primary infection
- > Obtain serology for IgG and IgM antibodies to viral capsid antigens (VCA) soon after symptoms of infection
- > About 80 % form antibodies to early antigens, which usually fall to undetectable levels by 6 months after infection
- > The presence of antibodies to early antigens at later times after acute infection has been considered to indicate possible viral reactivation

Management

- > Supportive treatment e.g. rest, fluids and analgesia if required
- > Most pregnant women will have a gradual, uneventful recovery after an acute phase lasting several days to 3 or 4 weeks
- > Fever usually resolves within two weeks
- > Abnormal liver transaminases occur in about 10 % of cases. Symptoms of nausea and anorexia and possibly vomiting could be expected
- > Significant organomegaly usually resolves within 1 to 3 months
- > Recovery from severe fatigue may occur quickly, however a full recovery to a feeling of wellbeing may take several months

References

1. Haeri S, Johnson N, Baker AM, Stuebe AM, Raines C, Barrow DA, Boggess KA. Maternal depression and Epstein-Barr virus reactivation in early pregnancy. *Obstet Gynecol* 2011; 117: 862-6
2. Arvin AM, Maldonado YA. Other viral infections of the fetus and newborn. In Remington JS, Klein JO, editors. *Infectious diseases of the fetus and newborn infant*. 5th ed. Philadelphia: WB Saunders; 2001.
3. Roche P, Halliday L, O'Brien E, Spencer J. The laboratory virology and serology reporting scheme, 1991 to 2000. *Communicable Diseases Intelligence* 2002; 26: 323-374.
4. Sumaya CV. Epstein-Barr virus. In: Feigin RD, Cherry JD, editors. *Textbook of Pediatric Infectious Diseases*. 4th ed. Philadelphia: WB Saunders Company; 1998. p. 1751-1764.
5. Avgil M, Diav-Citrin O, Shechtman S, Arnon J. Epstein-Barr virus infection in pregnancy-A prospective controlled study. *Reprod Toxicology* 2008; 25: 468-471 (Level III-2).
6. Fleisher G, Bolognese R. Infectious mononucleosis during gestation: Report of three women and their infants studied prospectively. *Pediatr Infect Dis* 1984; 3: 308-311 (Level III – 2).
7. Eskild A, Bruu A-L, Stray-Petersen B, Jenum P. Epstein-Barr virus infection during pregnancy and the risk of adverse pregnancy outcome. *BJOG* 2005; 112: 1620-24.

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Useful web sites

SA Department of Health: You've got what - Glandular fever

<http://www.dh.sa.gov.au/pehs/ygw/glandularfever-pehs-sahealth-2009-pehs-sahealth-2009.pdf>

Centers for Disease Control and Prevention (CDC) – Epstein-Barr virus and infectious mononucleosis:

Available from URL:

<http://www.cdc.gov/ncidod/diseases/ebv.htm>

Abbreviations

CDC	Centers for disease control and prevention
EBV	Epstein-Barr virus
ed.	Edition
e.g.	For example
et al.	And others
%	Percent
HIV	Human immunodeficiency virus
IgG	Immunoglobulin G
IgM	Immunoglobulin M
URL	Uniform resource locator
VCA	Viral capsid antigens

Version control and change history

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