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To: All GPs
Medical Directors HSC Trusts *(for onward dissemination to medical staff in Obstetrics & Gynaecology)*
Directors of Nursing HSC Trusts *(for onward dissemination to Hospital and Community Midwives)*
CCDCS, HSS Boards
Regional Virologists
Regional Epidemiologists

Your Ref:
Our Ref: HSS(MD)11/2008
Date: 31 March 2008

Dear Colleague

PARVOVIRUS B19 INFECTION IN PREGNANT WOMEN

The Regional Virus Laboratory have identified an increase in the reporting of parvovirus B19 like illnesses in children i.e slapped cheek syndrome since January this year. In addition they have confirmed infection, using B19 specific IgM and PCR, in 4 pregnant women. This urgent communication provides information about Parvovirus B19 and the management of suspected infections in pregnant women.

What is Parvovirus B19 and how is it transmitted?

Parvovirus B19 is a single-stranded DNA virus belonging to the Parvoviridae family of viruses. Parvoviruses are species specific and B19 is the only known pathogenic human parvovirus. Parvovirus B19 infection is common and occurs world wide. The disease is not notifiable and surveillance relies on laboratory-confirmed cases. Infection is most common in children aged 6-10 years, but can occur at any age. Antibody prevalence studies have shown that approximately 60 per cent of adults in the UK have serological evidence of past infection with parvovirus B19. One attack is thought to confer lifelong immunity.

Respiratory secretions are involved in transmission. The virus is transmitted effectively after close contact. The virus can also be transmitted parenterally by some blood products (but not intramuscular immunoglobulins) and vertically from mother to fetus. Faecal-oral transmission has not been documented. Studies of secondary illness in households suggest that the incubation period for clinical erythema infectiosum is 13-18 days, but can be as long as 20 days. Once the rash is present, the subject is no longer infectious.

Clinical Manifestations

The most common clinical presentation is erythema infectiosum (also called fifth disease and 'slapped cheek syndrome'). It is characterised by a facial rash, which spreads to the trunk and limbs, usually preceded by a non-specific flu-like illness. Erythema infectiosum is clinically similar to rubella and the two diseases can be reliably distinguished only by laboratory tests. Parvovirus B 19 is also associated with rheumatological symptoms which can last for months in a small proportion of patients. Rarely, neurological and cardiac manifestations have been described. There are no symptoms in about 20-30 per cent of infections.

Infections in pregnancy

Approximately 40% of women in the child bearing years are non-immune to B19, and therefore at risk of infection if exposed to a clinical case; often infections in pregnancy are asymptomatic. Most women who are infected with parvovirus B19 infection during pregnancy have a satisfactory outcome. However, gestational parvovirus B19 infection has been associated with adverse consequences such as fetal death and occasionally hydrops fetalis. Spontaneous recovery of hydropic fetuses may occur with subsequent delivery of a normal infant. A prospective study of pregnant women in the UK estimated that parvovirus B19 infection in pregnancy caused fetal loss in 9 per cent of pregnancies in which infection occurs during the first 20 weeks and hydrops fetalis in 3 per cent of pregnancies in which infection occurred between 9 and 20 weeks. The risk of fetal loss in women with asymptomatic infection appears to be similar to that in women with a rash. Fetal infection without fetal loss or hydrops is common. There is no evidence of B19-associated congenital abnormality in the newborn or developmental abnormalities appearing later in childhood.

Actions for Infections in Pregnancy

Pregnant women should be:

- informed about rashes in pregnancy and,
- investigated and followed up after contact with a rash or if they have developed a rash themselves.

Guidance on the investigation of rashes in pregnant women is available on the HPA web site http://www.hpa.org.uk/infections/topics_az/pregnancy/rashes/further_info.htm.

The Regional Virus Laboratory has a “Rash in Pregnancy” form that can be accessed at (B) http://www.bll.n-i.nhs.uk/assets/docs/viro/B19%20and%20Rash%20or%20Contact%20with%20a%20rash%20in%20Pregnancy%20Form%20jan06.doc and used for requesting appropriate tests.

Clinical advice can also be obtained from virology staff on 02890 635239.

Where Parvovirus B19 infection is confirmed in the first 20 weeks of gestation, the woman should be referred for serial ultra-sound monitoring for fetal hydrops. Intrauterine fetal transfusion, which requires specialist clinical expertise, is used for the treatment of hydrops fetalis in some centres and has been shown to improve survival. The specific management of

gestational parvovirus B19 infection in individual cases is arrived at after consultation between the mother and the obstetrician. There is no indication for therapeutic termination of pregnancy or routine antenatal screening for maternal parvovirus B19 infection.

Further information on Parvovirus B19 infection available at
http://www.hpa.org.uk/infections/topics_az/parvovirus/menu.htm

Yours sincerely

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