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CHICKEN POX IN PREGNANCY

FETAL EFFECTS

Fetal Varicella Syndrome (FVS) can occur after primary infection of a mother with the Herpes zoster virus. Most cases arise from infection in the first half of pregnancy and the greatest risk is between 13 and 20 weeks. **The overall the risk of FVS following maternal Varicella is <2%** but about 50% of the surviving infants have mental retardation. Other effects include skin scarring, eye defects (micropthalmia, chorioretinitis, cataracts), limb hypoplasia and bowel/bladder sphincter dysfunction.

Maternal primary Varicella infection between 20 and 36 weeks of pregnancy is not associated with adverse fetal effect although occasionally such babies develop shingles in the first few years of life

Maternal shingles carried no risk of FVS.

Diagnosis of intrauterine fetal Varicella by ultrasound (limb hypoplasia, microcephaly, soft tissue calcification, IUGR) or amniocentesis for HZV DNA by PCR is possible but not all fetuses who are DNA-positive develop fetal Varicella syndrome. Consultation with a Level 3 Neonatal Service or Prenatal Diagnosis Unit is recommended in the event of proven maternal chicken pox at <20 weeks or >36 weeks pregnancy.

MATERNAL RISKS

Most adults (up to 90%) are immune to Herpes zoster i.e. IgG positive. Pregnant women who contract chicken pox are at a greater risk than other adults of pneumonitis (10%), hepatitis and encephalitis. Management of maternal infection is controversial. Acyclovir may be required and consultation with a Specialist in Infectious Diseases is recommended.

PERINATAL RISKS

Maternal varicella late in pregnancy can result in neonatal chicken pox in 20-60% of cases but the risk is greatest if the maternal rash occurs 5 days before and up to 2 days after delivery. Neonatal varicella can be severe with a mortality rate of up to 30%. Acyclovir may be required.

RECOMMENDATIONS

- It is beneficial to enquire of all pregnant women at their first antenatal visit about past history of chicken pox. In the absence of such history it may be beneficial to test for HSV IgG and or to advise seronegative women to avoid contact with known cases of chicken pox.
- Pregnant women who come into close contact with Varicella and who have no convincing history of past chicken pox should have blood taken for an urgent assessment of IgG antibodies to Herpes Zoster. (*Close contact is defined as household exposure, face to face contact for >5 minutes or*

indoors exposure >15 minutes to an individual who is in the infectious phase of the disease ie 48 hours before the rash and up until the lesions crust over).

- If the mother is IgG positive no further action is required.
- If the mother is IgG negative she can be offered zoster immune globulin (ZIG) ZIG is given to alleviate the effect of maternal Varicella. The administration can be delayed until the results of serology are known because beneficial effects can occur up to 10 days after exposure. There is no conclusive evidence that ZIG affects the rate of FVS.. The dose is 2 x 3ml of ZIG intramuscularly.
- Oral Acyclovir is recommended for pregnant women who develop chicken pox at >20 weeks pregnancy but treatment must begin within 24 hours of the onset of the rash. Consultation with a virologist is recommended as certain high risk individuals may require admission to hospital especially if complications develop.
- Delivery during the viraemic phase should be avoided. Delay in delivery by >5 days is associated with a degree of neonatal protection by the passive transfer of antibodies.
- If a mother has had chicken pox within 2 weeks before delivery or develops the rash within 2 days after a delivery a paediatrician is notified. Neonatal ZIG administration is recommended and Acyclovir may be required if infection develops.
- Infants born up to 7 days born to non immune mothers who are exposed to chicken pox e.g. sibling at home with the disease should be given ZIG.
- Non immune health care workers who are exposed to chickenpox should avoid patient contact for 8-21 days post contact.

Ref: L Gilbert,RACOG, RACOG Resource Unit 129. December 1995.

RCOG Guideline No. 13, July 2001

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