COMMENCING May 2006

Australian Paediatric Surveillance Unit
STUDY PROTOCOL
Neonatal Varicella

BACKGROUND

Neonatal varicella (varicella developing in the first month of life) may be due to either intrauterine or post-natal infection. When maternal varicella occurs 1-4 weeks before delivery, the fetal infection rate is about 50% and the illness may be severe with fever, haemorrhagic rash and generalised visceral involvement. Children who acquire infection postnatally may also be severely affected.

In the previous APSU study, there were 44 reports of neonatal varicella (an estimated 5.8 per 10^5 live births or 1 in 17000 pregnancies per year). Illness severity was reported in 42 children. Two children had a severe illness (fever, rash, generalized visceral involvement) and neither had received ZIG nor acyclovir. Of ten children with a moderately severe illness only 4 had received ZIG and 2 had received acyclovir. Of thirty children with a mild illness, 20 had received ZIG and 1 had received acyclovir. (1).

There has been no systematic surveillance of neonatal varicella in Australia since the end of the previous APSU study in 1997. The current Australian management practice is unknown as there has been no documentation of practice since the publication of guidelines for the management of perinatal varicella infections in 2002 (2).Given that varicella vaccination is now recommended in the latest NHMRC immunisation schedule (3), this study will give a unique opportunity to document the rate of neonatal infection and management of neonatal varicella and compare findings with the previous study.

STUDY OBJECTIVES

1. To estimate the incidence of neonatal varicella infection seen by Australian paediatricians and its associated morbidity and mortality.
2. To document the source of maternal and neonatal infection.
3. To compare results with those from a previous APSU study of neonatal varicella that concluded in 1997, prior to the availability of varicella vaccination.
4. To document current management practices and short term outcome of neonatal varicella.
5. To estimate the need for screening to identify non-immune women antenatally.

CASE DEFINITION AND REPORTING INSTRUCTIONS

Report any infant who, in the opinion of the notifying paediatrician, has neonatal varicella based on history, clinical and/or laboratory findings in the first month of life <u>without</u> features of congenital varicella syndrome.

Features of neonatal varicella infection include pox-like rash which may be papulovesicular, vesiculopustular or haemorrhagic, and fever. Other systemic symptoms may be present. Complications of neonatal varicella include bacterial superinfection, neurological and haematological problems and general visceral involvement.

The diagnosis of neonatal varicella can be made when an infant in the first month of life presents with clinical features of varicella infection. There may be a history of maternal varicella infection in the last 1-4 weeks of pregnancy or contact with a varicella infected person after birth.

The diagnosis can be confirmed by laboratory tests to detect:

- viral antigen/viral isolate from scrapings of the skin lesions or viral DNA from lesion fluid
- varicella specific IgM in a serum sample from the infant (or from the contact)

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