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Neonatal Varicella and Acyclovir

Sir,

Neonatal Varicella has a high mortality and morbidity risk. Many health workers are not familiar with the case fatality of Neonatal Varicella or the significance of chickenpox developing in the mother towards delivery. There is also some misconception regarding the terms congenital and neonatal varicella and the use of Acyclovir. We would like to share our experience in Sultan Qaboos University Hospital recently. A 16-day-old baby born to a mother who developed chickenpox at the time of delivery, presented with neonatal varicella, pneumonia and seizures. Baby had received Varicella Zoster Immunoglobulin[1] (VZIG) prophylaxis in the local hospital and was discharged home. There was a delay between onset of symptoms and initiation of Acyclovir therapy due to lack of awareness of the fatality of neonatal varicella. Baby was moribund and very sick and had to be intubated and ventilated for 10 days and ultimately recovered with Acyclovir, anticonvulsant and other supportive measures.

Chickenpox in the mother during pregnancy can lead to Congenital Varicella Syndrome on Neonatal Varicella depending on the time of onset of infection. Risk of Congenital Varicella embryopathy is highest between 13 and 20 weeks of gestation, with an incidence of 2-3%. Neonatal Varicella on the other hand, may occur when maternal disease develops after 37 weeks.

The highest risk of fatal infection in the newborn occurs when the mother becomes symptomatic between 5 days before and 2 days after delivery where the mortality is up to 30%. Hence it is worth considering certain facts: 1. The knowledge that Neonatal Varicella is fatal with a mortality up to 30% if the mother develops chickenpox within 4-5 days before delivery and 2 days after delivery, should be disseminated to the health workers and family members in contact with chickenpox; 2. VZIG to have maximum benefit, should preferably be used within 48 hours of exposure. Also administration of VZIG may prolong the incubation period, as well as modify the disease; 3. Intravenous Acyclovir to be fully effective should be given within 24 hours of onset of symptoms; 4. Oral Acyclovir in a dose of 40 mgm/kg/day in 4 divided doses for 5 days can prevent or modify clinical varicella if used late in the incubation period after household exposure.[2,3] A neonate exposed to maternal varicella 4-5 days before and 2 days after delivery is immunocompromized, as these infants are born before transplacental transfer of maternal antibody and the immune responses of the neonate are insufficient to retard the growth and dissemination of Varicella Zoster Virus. Therefore, there seems to be a point in giving oral Acyclovir to abort or modify clinical varicella in this group of neonates before the disease manifests.[4] However, a prospective study is required to confirm the efficacy, as well as safety (especially renal) of oral Acyclovir in this neonatal age group, where the disease is fatal with visceral complications like viral pneumonia; 5. Once Varicella vaccine becomes freely available and routinely used, the incidence will probably become less.

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