Letters to the Editor

Early Onset Neonatal Septicemia Caused by *Aeromonas hydrophilia*

Aeromonas hydrophilia, a Gram negative aerobe of low virulence is being increasingly identified as a primary pathogen in causation of diarrhea at all ages, specially in immuno-compromised hosts. Infrequently, the organism is implicated in children with infections of the skin, bone, joint, eye, muscle, urinary tract, lungs and meninges (l). During neonatal age, fulminant infections such as septicemia and meningitis are reported in only one case each till date (l,2).

We are presenting a case of early onset septicemia with *A. hydrophilia* in a newborn baby. This child was delivered vaginally at term and weighed 2.0 kg. The mother was malnourished, had severe pallor (Hb-5 g/ dl) and was running fever with leaking per vaginum for three days prior to delivery. There was no history of loose stools in the mother.

Taking into account the maternal risk factors, the gastric aspirate of the child was examined and revealed 10 to 12 polymorphs per high power field. Micro ESR was 12 mm at birth. Subsequently, a complete septic work up was performed and intravenous antibiotics (ampicillin and gentamicin) were started in the usual dosages. At 16 hours of age, he developed respiratory distress (respiratory rate 80/min with subcostal and intercostal retractions), started groaning and refused feeds. On examination he was found to be sluggish. There was no cyanosis, pallor, fever or convulsions. Chest examination revealed bilateral crepitations. Rest of the systemic examination was normal. Feeding was stopped and intravenous fluids were started. Oxygen was administered with a hood. There was no improvement in the child's condition even after 24 hours. On 3rd day of life, petechial spots appeared over trunk and limbs. Terminally the child had pulmonary hemorrhage and went into shock. He died at the age of 52 hours despite adequate therapeutic measures. Investigations revealed a hemoglobin of 18.3 g/dl, total leucocyte count of 6,600 per cubic mm (P_{78} L_{18} M_1 E_3) with 25% band forms and toxic granulations in the peripheral smear. Chest radiograph suggested bronchopneumonia. CSF was within normal limits. Blood culture revealed a pure growth of *Aeromonas hydrophilia* which was sensitive to chloramphenicol, gentamicin, cefotaxime, amikacin and netilmicin and resistant to cephalexin, ciprofloxacin and cotrimoxazole. The organism was identified on the basis of colony character and biochemical reactions(3). *Aeromonas hydrophilia* infection in the neonates characteristically results in diarrhea. The source of infection is usually nosocomial and hospital water supply has been incriminated in nursery epidemics(4). However, in the present case, nosocomial spread is unlikely, since parallel blood cultures from other infants did not yield *A. hydrophilia.* Early onset septicemia with *A. hydrophilia* is not described in the literature. In this case, the mother could have been harboring the organism resulting in its vertical transmission.

Aeromonas hydrophilia derives most of its virulence from the cytotoxins and hemolysins it produces following invasion. Mortality is reported to be 50-70% in

established childhood septicemias. The organism is usually sensitive to chloramphenicol and trimethoprim-sulfa combination. However, both these drugs should be cautiously used in newborns. Alternatively, cefotaxime and one of the aminoglycosides may be used depending upon the sensitivity tests.

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REFERENCES

1. Feigin RD. Aeromonas. *In:* Textbook of Pediatric Infectious Diseases, 2nd edn. Eds. Feigin RD, Cherry JD. Philadelphia, WB Sauders Company, 1987, pp 1075-,1079
2. Verghese LS, Raju BB, Ramanath A, Raghu MB, Siyakumar A. Septicemia caused by *Aeromonas hydrophilia* in a neonate. J Assoc Phys India 1994, 42: 909- 910.
3. Lee JV. *Vibrio, Aeromonas and Plesiomonas. In:* Topley and Wilson's Principles of Bacteriology, Virology and Immunology, Vol 2. Eds. Parker MT, Duesden BL. London Edward Arnod, 1990, pp 526.
4. Guerrant RL, Cleary TG, Pickering LK. Microorganisms responsible for neonatal diarrhea. *In:* Infectious Diseases of the Fetus and Newborn Infant, 3rd edn. Eds. Remington JS, Clein JO. Philadelphia, WB Saunders Company, 1990, p 940.