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Neonatal Tetanus Despite Antenatal Immunization

Occurrence of neonatal tetanus despite antenatal immunization is unfortunate. Nineteen such cases were admitted in the Department of Pediatrics, Maulana Azad Medical College and associated LNJPN Hospital, New Delhi between October 1992 to October. 1993. Three cases were from Delhi slums, the rest were from rural Western D.P. adjoining Delhi. In 13 cases, the mothers were immunized between 5th and 8th months of pregnancy. Four of these cases died. In the other 6 cases, the mothers had received only one dose of tetanus toxoid during pregnancy between 8th and 9th months. Three of these cases died.

Occurrence of neonatal tetanus despite maternal immunization with tetanus toxoid has been reported earlier(1-4). Loss of potency of the vaccine due to improper storage has been thought to be the cause of the vaccine failure. We feel that the improper timing of the immunization, *i.e.,* after the first trimester, may be an equally important cause of it. A similar observation was also made by Deivanayagam *et al.(4).* Immunization of the mother in the second or third trimester of pregnancy may not be effective in conferring adequate protective immunity. Giving one dose of tetanus toxoid as primary immunization also may not do any good.

The mortality of tetanus neonatorum in our country is still very high, and most of the cases occur in rural areas and disadvantaged localities in urban areas. Reducing the incidence of neonatal tetanus through antenatal immunization of mother with tetanus toxoid is an effective way of overcoming the problem. This strategy has rightly been adopted in our national immunization programme. However, delayed antenatal immunization and denatured vaccine will hamper the' success of the immunization programme. Timely antenatal immunization may be hindered by ignorance and apprehension on the part of the mother(3) and non-reporting of pregnancy in the first trimester. We feel that there is need of strengthening the strategies for proper storage of vaccine at every level and antenatal immunization with tetanus toxoid right in the first trimester of pregnancy in order to prevent failure of maternal immunization. Education and motivation of the prospective mothers about prevention of neonatal tetanus will improve the first trimester immunization with tetanus toxoid.

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Pediatric Mechanical Ventilation in India Need, Indications, Cost and Problems

We are undertaking mechanical ventilation (MV) seriously since three years, begining with infants and children and then including neonates also. MV is provided to about 15 cases every month presently, 1 to 3 cases receiving it at a time. MV typically lasts for a few days, longest duration having been 37 days. Overall survival of 30% in 1992 is steadily improving. The following presentation of our experiences at Choithram Hospital and Research Centre, Indore is partly based on a prospective study(l).

The need for MV arose in about 10 to 20% of the Pediatric and the Neonatal Special Care Unit Admissions (annual admissions 500 in each unit) and in 3 to 5% of total pediatric and neonatal admissions (annual admissions 2500). Most babies needing MV were below 1 year.

The disorders requiring MV in neonates were hyaline membrane disease, protracted apnea, birth asphyxia, aspiration, septicemia and others. In infants and children these were neurological (encephalitis, meningitis, poliomyelitis, polyneuritis, malaria, *etc.),* cardiorespiratory (respiratory infection, aspiration, congenital heart disease), metabolic and others (injuries, poisonings, bites). Preventable nature of many cases always struck us and indicated that the resources should be directed there first.

The average cost of MV in general ward has been Rs. 7000 per week. Twenty per cent of this is accounted for by MV proper (bed, ventilator, nurses, doctors); 30% by MV monitoring (blood gases, vital signs monitors, X-rays) and 50% by other management (biochemistry, cultures, drugs, nutrition, blood products, *etc.)*

The expenses have been upto 15 to 25,000 Rupees per week in cases with multiple organ failure who required extensive support. Ethical and legal considerations prevented us from selecting only good prognosis cases or those requiring short-term, low monitoring MV only, although cost effective utilization of limited resources in our country would call for it.

Initially main problem occurred with airway management (delay in intubation,