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## *Letters to the Editor*

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### **Follow-Up of Newborns Receiving Intermittent Mandatory Ventilation - Outcome and Limitations**

Neonatal intensive care has increased the survival of high risk neonates. The high costs involved have however, been a matter of concern among health care providers(1,2). Despite the high financial implications, a satisfactory developmental outcome of survivors could justify the provision of intensive neonatal care, even in a developing country. A prospective study was undertaken at the Kasturba Medical College, Manipal, to follow-up neonates who had received Intermittent Mandatory Ventilation (IMV), to assess the neuro-developmental outcome of these infants.

Infants who received IMV over a 15 month period (January 1993-March 1994) were enrolled for the study. Infants who had received IMV for less than 6 h, were ventilated at other unit prior to referral to our center or had major malformations which could influence their neurodevelopmental outcome were excluded. Thus of 58 infants ventilated during this period, there were 27 survivors who qualified for the follow-up. All these infants had neurosonographic evaluation. BAER was done at 3 months corrected gestation for all infants and preterms were evaluated for retinopathy of prematurity. The infants were followed at 3 monthly intervals till one year of corrected age(3). A modified scoring system based on the Bayley's Scales for

Infant Development was used to assess their development. Physical Development Quotient (PDQ) or Mental Development Quotient (MDQ) less than 80% was considered as delay(4). In cases where the follow-up visit had been delayed by three months, a letter in the local language (Kannada/Malayalam) was sent to the parents, requesting them to bring their baby for follow-up. A questionnaire (based on BSID) for obtaining information about the development of the baby was sent on a self-addressed inland along with this letter, to be answered if they were unable to come for follow-up. In the absence of a reply to the initial letter, a second letter was sent after three months. If there was no response despite the two letters, the patient was considered as lost to follow-up. Infants with developmental delay were referred for a detailed evaluation by Denver Development Scale and for occupational rehabilitation.

The primary reason for loss of follow-up were death (n=3) and wrong or changed address (n=10). Of the 27 survivors enrolled for follow up, 18 infants were followed up beyond six months and 14 over one year of corrected age. Eighty three per cent (n=15) of those followed up beyond 6 months and 85% (n=12) of those followed up beyond one year had Development Quotient (DQ) over 80%. There was no significant difference between the DQ assessed at six months and that at one year of corrected age. All infants who had a DQ < 80% had been extramural transfers. However, this difference in DQ based on the place of delivery was insignificant. Retinal examination at the time of discharge was normal in 15 of the eighteen surviving

preterms. One preterm infant (30 wk, HMD) had shown stage 1 ROP and the other two had retinal hemorrhages. All of them recovered without any residual lesions and the retina was reported to be normal at 12 weeks of corrected age. BAER done were normal in all infants.

Thus, most of the survivors of neonatal ventilation had a normal development between 6-12 months age. A better developmental outcome of inborn infants strongly suggests that until specialized neonatal transport services are developed, the aim must be to anticipate the neonatal problems and carry out intramural transfer. Infants must be followed up till at least six months of corrected age and preferably longer to evaluate their development. This pilot study would require a larger number of babies followed before our findings can be generalized in the Indian setting.

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### **Nutrient Intake and Consumption of Supplementary Nutrition by Pregnant Mothers in ICDS and Non-ICDS Areas - A Pilot Study**

The Integrated Child Development Services (ICDS) scheme is being implemented in 3701 projects of the country(1). The scheme delivers a package of services to mothers and children. An important component of the package of services is delivery of supplementary nutrition (500 kcals and 18-20 g of protein) to the pregnant mothers during the second and third trimester of pregnancy.

Studies conducted under controlled

supervised trials have documented that the supplementary nutrition when being provided to the pregnant mothers (additional 500 Kcal) improves the birth weight of the newborn(2-6). On the other hand no significant differences have been observed in the birth weight of the newborn between the supplemented and the unsupplemented group of pregnant mothers(7). However, we do not have data on the actual consumption of supplementary nutrition provided to the pregnant mothers in the field conditions of a National Nutrition Programme.

We conducted a pilot study in which 174 pregnant mothers registered as beneficiaries for receiving supplementary nutrition in an ICDS project in the National