Acta Scientific PAEDIATRICS (ISSN: 2581-883X)

Volume 6 Issue 1 January 2023

Editorial

Editorial: Numbers and Figures in Prematurity

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Received: November 21, 2022

Published: December 01, 2022

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World prematurity day is celebrated on 17th November every year. Preterm infants (PTI) are unfortunate babies born with various physical and physiological handicaps and need life supporting and promoting interventions for their survival in ex-utero environment especially the extremely preterm infants (EPTI). Majority of preterm deliveries (>80%) occur spontaneously - either by preterm labour or induced preterm premature rupture of membranes (5 - 40%). PTI comprise 11% (5-18%) of total live births. Annually 5million preterm births (<37 wks GA) are taking place worldwide. One million PTIs are dying every year worldwide and contributing significantly to under five mortality [1], WHO. Preterm and small for gestational age (SGA) babies together constitute 43.3 million, preterm adequate for gestational age (AGA) -6.3million and preterm with LBW - 7.4 million (preterm AGA-LBW 4.6 million + Preterm with SGA -2.8 million), [2] Lee A CC, 2013. Highest preterm births are occurring in low to middle income countries (LMIC). The highest preterm birth figures are with India as a single country (3.5 million preterm births per year) with 12.9% prematurity birth rate. More than 90% of EPTI deaths are occurring in developing countries and only less than 10% deaths taking place in developed countries. Three fourth of PTI deaths that take place in LMIC are preventable with cost effective strategies. One third of neonatal mortality rate (NMR) is contributed by prematurity and or low birth weight (LBW).

The percentage-wise distribution of prematurity among gestational age groups as follows

(Table a)

Gestational age group -weeks	PTI Group	Percentage distribution
34 - 36 (+6days)	Late PTIs	74%
32 - < 34	Moderate PTIs	11%
28 - < 32	Very PTIs	10%
< 28	Extremely PTI	5%

Table a

The late to very PTIs comprise 95% of total preterm population and LPTI group alone contribute to 74% of the total. Hence, these groups should be focused and targeted for reducing the preterm mortality by cost effective interventions. The following ten commandments of evidence-based cost-effective strategies [3] should be adopted to reduce the premature mortality especially in LMIC.

Maternal interventions

- Provision of antenatal corticosteroids (dexamethazone/betamethazone) to mothers with threatened premature birth within 7 days between 24 to 34wks GA (for fetal lung maturation, prevention IVH and NEC).
- Tocolytic agents for labour inhibition.
- Magnesium sulphate infusion for foetal neuroprotection and prevention of cerebral palsy.
- Antenatal antibiotic administration (Erythromycin) for preterm premature rupture of membranes.
- Encouraging institutional delivery by optimum mode like LSCS if needed.

Neonatal strategies

- Kangaroo mother care should be provided to all PTIs with birth weight < 2KG as soon as possible after birth.
- Clean umbilical cord cut and application of Chlorhexidine. Ensure proper hand hygiene practices.
- Practice delayed cord clamping for 45 to 60 seconds or cord milking if not contraindicated.

- Provision of early breast feeds within half an hour to one hour.
- Supportive non-invasive ventilation for respiratory distress syndrome like CPAP.

Other interventions
- Vitamin K prophylaxis at birth. Micronutrient supplementation.
- Timely immunization.
- Follow up services by healthcare personnel.

It is possible to significantly reduce the PTI mortality by universally adopting these strategies among care of late PTI to VPTI groups.

Conflicts of Interest

Nill.

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