

## Early onset neonatal sepsis.

Early onset neonatal sepsis despite a low incidence has a high mortality rate of over 50%, hence early diagnosis and institution of antibiotics within 24 hours of birth is important to prevent not only the high mortality but also morbidity. However there is a lack of an ideal confirmatory diagnostic test within 24 hours of birth with 100% sensitivity and 100% specificity is challenging to the clinician in making an accurate and early diagnosis of early onset sepsis. Most etiological pathogens cause in-utero with fetal infections and identification of predisposing high risk maternal, obstetric and neonatal factors are important as it support a high index of clinical suspicion warranting screening for sepsis.

Multivariate analysis and multiple logistic regression of various antepartum, intrapartum and neonatal factors revealed that young mothers  $\leq 24$  years, OR 1.53, (95% CI 1.2-2.0) and primigravidae, OR 2.08, (95% CI 1.6-2.7) was highly statistically significant  $P > |z| = 0.002$  and  $P > |z| < 0.001$  respectively. Premature Rupture of Membranes (PROM) OR 12.96, (95% CI 9.5-18.4),  $P > |z| < 0.001$  as well as Gestational diabetes OR 2.19, (95% CI 1-1.3),  $P > |z| < 0.008$  was statistically significant. Surprisingly birth by emergency Lower Segment Cesarean Section (LSCS) OR 1.82, (95% CI 1.3-2.5),  $P > |z| < 0.001$ , since the usual indication was fetal distress probably due to in-utero infection including neonatal risk factors of prematurity  $\leq 36$  weeks, OR 2.57, (95% CI 1.8-3.6),  $P > |z| < 0.001$  and Low Birth Weight (LBW)  $\leq 2499$ g, OR 2.76, (95% CI 2.1-3.7),  $P > |z| < 0.001$ , and male gender, OR 1.88, (95% CI 1.1-3.0),  $P > |z| < 0.008$  were also highly statistically significant.

Presently reported global incidence of neonatal sepsis was is low, less than 4%, while it was 8.9% in present study, clinical observation despite its limitation and diagnostic hematologic tests including serological markers tests remain the most practical means to confirm and monitor progress of disease or to withhold antibiotics in uninfected newborns thereby decreasing the emergence of multidrug resistant pathogens Thus early diagnosis based on presence of two or more high risk maternal, obstetric and neonatal factors, warrants screening for sepsis in newborns and early antibiotic therapy will not only save lives but also decrease morbidity of severe lifelong threatening sequelae such as seizures, mental retardation, blindness, hearing loss etc. The awareness of the role of infection causing high morbidity and mortality in the newborn has increased dramatically over the past few decades, emphasizing the importance of early diagnosis of early onset neonatal sepsis.

**Keywords:** Early Onset Sepsis (EOS), High risk antepartum, intra-partum and neonatal factors

### Biography:

Dr. Grace Lalana Christopher completed both her undergraduate M.B.B.S. and postgraduate DCH at reputed Christian Medical College & Hospital, Vellore, South India, thereafter completed her DNB course from Bangalore. She has qualified for ECFMG (US) currently valid. She is a Consultant Pediatrician at Grace Specialist Clinic and Founder, CEO of 'New Gen Parenting'. She is an eminent speaker in the field of Perinatology and authored several books on Parenting and child care. She has published several leading original scientific research papers in pediatrics and new-born care including innovative "Newborn Resuscitation" and presented papers at several reputed conferences.

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