
**OUTCOMES OF UNIVERSAL NEONATAL HEARING
SCREENING PROGRAM IN A TERTIARY CARE HOSPITAL**

BY

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ABSTRACT

BACKGROUND:

One of the most vital senses that a child requires in terms of cognitive-linguistic growth is hearing .Congenital hearing loss is known to be a major birth abnormality in newborns .Hearing disability is usually hidden and does not manifest until after 2 years of birth when the child starts to speak losing the advantage of golden period by which time there is limited opportunity for management which makes newborn screening essential.

AIMS AND OBJECTIVES: -

1. To estimate the incidence of hearing loss in neonates in SDM hospital
2. To assess the high risk factors influencing the neonatal hearing loss.
3. To assess the challenges associated with the implementation of Universal Hearing Screening Program in a tertiary care hospital.

MATERIALS AND METHODS: -

A cross sectional type of study was conducted over 12 months comprising 1026 newborns .All newborns medical records were reviewed , history and examination done for possible prenatal,natal and postnatal risk factors like previous family history of hearing loss, parents consanguinity, craniofacial anomalies, birth weight <1500 gms, premature birth, viral/Bacterial meningitis, birth asphyxia, APGAR score 0-4 @1 min, 0-6 @ 5 mins,hyperbilirubinemia.Screening was conducted in 3 phases as per JCIH 2013 protocol using Oto Acoustic Emission and Automated Auditory Brainstem Response in first 2 phases and diagnostic Brainstem Evoked Response Audiometry in the third phase.

RESULTS: -

Out of 1026 babies screened over the duration of 1 year, 921 were well babies and 105 in the NICU where they had high risk factors .206 babies were assigned with the

REFER result in the first screening and were to have the second screening; 136 newborns attended the second screening and 70 were lost to follow up and 9 babies recorded REFER in second screening. 5 newborns underwent diagnostic BERA and were detected with hearing loss. The main challenges faced were in tracing the loss to follow up patients.

CONCLUSION: -

Universal newborn hearing screening is a practical, efficient, and clinically useful approach towards early detection of neonatal hearing loss in a tertiary hospital. In our study we found NICU stay, consanguinity to be significantly associated and craniofacial facial anomalies strongly associated with the failure results.

Keywords: Congenital Hearing loss, Newborn Hearing screening, Oto Acoustic Emission, Brainstem Evoked Response Audiometry