



▼ POST GRADUATES ABSTRACTS

PG -14: EARLY DETECTION OF HEARING LOSS IN NEONATES.

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Aim: This study aimed to determine the incidence of hearing loss in healthy newborns thus assessing the effectiveness and utility of OAE as a screening tool to detect hearing impairment in newborns.

Study design: Prospective cross sectional study

Methods: Over a period of 18 months, all healthy neonates delivered in a rural tertiary care centre were included in the study. Neonates with congenital malformations of the external ear were excluded from the study. All candidates underwent hearing screening in a sound treated room in the department using Distortion Product Otoacoustic Emissions (DPOAE) test at 24-72 hours of life. For cases failing the test, the

test was repeated immediately. Those infants failing the second test were re-screened at 30 days of life. Infants failing the third OAE test then underwent BERA testing after 3 months to confirm hearing loss.

Results: 3121 neonates were included in the study, of which 689 (22.07%) failed the initial screening, 84 (2.69%) failed the second OAE, 59 (1.89%) failed the third OAE and 32 (1.03%) neonates were diagnosed with hearing impairment using BERA. Risk factors which had significant correlation with hearing screening failure included male gender ($p=0.01$), low gestational

age ($p=0.01$), birth weight <2500 gm ($p=0.01$), maternal age ($p=0.01$), multiple gestation ($p=0.01$), consanguineous parents ($p<0.01$), Caesarean section ($p=0.03$), family history of hearing loss ($p=0.01$).

Conclusion: The prevalence of impaired hearing in the population of Pondicherry appears to be higher than the global average and may be related to local risk factors such as high prevalence of consanguinity. The three staged screening protocol with DPOAE is a useful protocol in detecting hearing loss in newborns and should be implemented as a national programme.