

SENSORINEURAL HEARING LOSS OF VERY LOW BIRTH WEIGHT INFANTS WITH HISTOLOGICAL CHORIOAMNIONITIS: A CASE-CONTROL STUDY

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Background and aims: Histological chorioamnionitis (HCAM) has been associated with inflammatory diseases of preterm infants. Recently, we have observed that VLBW infants with HCAM present an increased risk of speech delay and hearing loss. So the aim of this study was to evaluate the relationship between sensorineural hearing loss (SNHL) in VLBWI and HCAM.

Methods: Between 2001 and 2010, we performed a double blind, case-control study on VLBW infants admitted to our NICU. Each patient with HCAM was matched with one control without HCAM, of the same gestational age ± 1 . All infants undergo standard hearing screening before discharge by means of transient-evoked otoacoustic emissions (TEOAEs) and automated auditory brainstem responses (AABRs), which were repeated at 3 and 6 months of corrected age with tympanometry measurement. Incidence of SNHL at 6 months of age was compared in the 2 groups. The following risk factors were also studied: Apgar Score at 1 and 5 minute, bronchopulmonary dysplasia, early and late sepsis, dexamethason and gentamycin administration.

Results: We enrolled 204 patients: 95 of them were excluded because of incomplete follow-up. Of the remaining 109, 2 newborns with HCAM (3.9%) e 6 without HCAM (10.5%) presented SNHL ($p=0.27$). After multivariate analysis, Apgar Score < 3 at 1 minute and dexamethasone administration presented an Odds Ratio, respectively of 24.6 (95% CI 3.6-166.6); $p=0.001$ and 20.0 (95% CI 2.5-158.2); $p=0.005$.

Conclusions: Apgar Score < 3 at 1 minute and dexamethasone administration increase the risk of SNHL in VLBWI, independent of HCAM.