



ORIGINAL ARTICLE

Neonatal hearing screening in a low-risk maternity hospital in São Paulo state^{☆,☆☆}



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KEYWORDS

Audiology;
Neonatal screening;
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Abstract

Introduction: The literature indicates that neonatal hearing screening should be universal, so a description of programs that adopt this recommendation is relevant.

Objective: To describe the results of newborn hearing screening and the profile of mothers and newborns attended to in a low-risk maternity setting, and to correlate the characteristics of this population with the results of transient evoked otoacoustic emissions.

Methods: A contemporary cross-sectional cohort study. The sample consisted of 670 infants and the procedures performed were audiological history, transient-evoked otoacoustic emissions (TEOAE), distortion product-evoked otoacoustic emissions (DPEOAE), and automated-brainstem auditory evoked potential (ABSAEP).

Results: The rate of success in this program was 98.5%, the failure rate was 0.62%, and that of non-attendance to finalize the diagnostic process, 0.93%. When correlating the variables studied with the results of transient evoked otoacoustic emissions, there was a significant negative correlation only for age of infant.

Conclusion: The program of this maternity hospital was effective and complies with national and international recommendations. The population consisted of young mothers with few

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PALAVRAS-CHAVE

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pregnancy complications and healthy infants. The only variable that influenced transient evoked otoacoustic emission results, after hospital discharge, was the age at which infants were evaluated.

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Triagem auditiva neonatal em uma maternidade de baixo risco do interior paulista

Resumo

Introdução: A literatura relata que a triagem auditiva neonatal deve ser universal, o que torna relevante a descrição de programas que adotam esta recomendação.

Objetivo: Descrever os resultados da triagem auditiva neonatal e o perfil das mães e recém-nascidos atendidos em uma maternidade de baixo risco e correlacionar as características desta população com os resultados das emissões otoacústicas evocadas transientes.

Método: Estudo coorte contemporâneo com corte transversal. A amostra foi composta por 670 bebês e os procedimentos realizados foram: anamnese audiológica, emissões otoacústicas (EOA) transientes, EOA produto de distorção, e potencial evocado auditivo de tronco encefálico automático.

Resultados: O índice de passa neste programa foi de 98,5%; de falha de 0,62% e o de não comparecimento para finalização do processo diagnóstico de 0,93%. Ao correlacionar as variáveis estudadas com os resultados das emissões otoacústicas transiente houve correlação negativa significativa apenas para a idade do bebê.

Conclusão: O programa desta maternidade mostrou-se efetivo e atende a recomendações nacionais e internacionais. A população foi composta por mães jovens com poucas intercorrências gestacionais e bebês saudáveis. A única variável que influenciou nos resultados das emissões otoacústicas por transiente, após a alta hospitalar, foi a idade em que os bebês foram avaliados.

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Introduction

The Universal Newborn Hearing Screening (UNHS) program seeks early detection of hearing loss, with the aim of evaluating the hearing ability of neonates with and without risk factors for hearing loss (RFHL). This process consists of performing behavioral, electroacoustic, and/or electrophysiological procedures to identify hearing loss.¹

Discussions about the importance and implementation of newborn hearing screening programs were initiated in the 1990s. In 2000, the Brazilian Speech Therapy Council issued an opinion indicating the need to implement hearing screening procedures in neonates using some objective methodology already described in the literature, such as recording evoked otoacoustic emissions and brainstem auditory evoked potential (BAEP).²

Several local and state laws have been passed in this country, making completion of the UNHS compulsory in maternity wards. Of note is National Law No. 12,303 of August 2, 2010, which determines the obligation to carry out evoked otoacoustic emission tests in all hospitals and maternity wards in children born on their premises.³ However, it is known that few public maternity facilities run a systematic universal newborn hearing screening program.⁴

The literature reports that the most widely used methods in newborn hearing screening programs are probably

the transient-evoked otoacoustic emission (T-EOAE) test in a first stage, and the auditory brainstem response in a second stage, for those infants who failed the T-EOAE test. The combination of both tests was designed to reduce the number of false-negative results, especially in cases of auditory neuropathy/dyssynchrony, in addition to improving the sensitivity and specificity of UNHS results.⁵⁻¹⁷

In reviewing the studies published in the Brazilian literature describing characteristics of newborn hearing screening programs, it is observed that most of them specify test results, gender, age, birth weight, and risk indicators. There have been numerous reports of screening results according to risk indicators.¹⁸⁻²⁸

Unlike articles published in the literature, the present study aimed to describe a newborn hearing screening program in which the majority of treated newborns had no risk indicators for hearing loss, which would decrease the incidence of hearing loss in this population. In addition, it was intended to expand the description of the characteristics commonly reported in the literature for mothers and newborns.

Considering the above, the aim of this study was to describe the results of a newborn hearing screening program and the profile of mothers and newborns attended in a low-risk maternity ward, as well as to correlate the

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