07 - "PET REDES SAUDI": FAILURES OF EXAMINATION OTOACOUSTIC EMISSIONS IN NEWBORN HEARING SCREENING OF A MATERNITY IN PUBLIC MACAÉ/RJ.

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INTRODUCTION

Hearing is the primary for the acquisition and development of speech and language (MARAZITA et al., 1993) sense. By the sixth month of gestation, the hearing aid is fully formed and functioning, and is extremely important for neurological development of the child. The neural constituent will mature through the experiences of the child, where it gives auditory plasticity (HILU; ZEIGELBOIM, 2007).

Because of this, the diagnosis performed in the first year of life provides medical and/or speech therapy even in neurological maturation period, possible hearing loss is detected. Deafness is the most common sensory deficit in humans, whose diagnosis is made late, around 3 years (BRASIL, 2010).

Therefore, early identification of hearing impairment, which may adversely affect the quality of human life, is performed from the newborn hearing screening (NHS), if possible, even on maternity. The NHS aims at early identification of hearing impairment in newborns and infants. Consists in the recording of transient evoked otoacoustic emissions (TEOE), a sensitive procedure in verifying the cochlear integrity, being a quick objective method, and non invasive (ANGRISANI et al., 2012).

In TEOE, conducts a test and if there is failure to respond to the examination, re-test, and possible referral to the diagnosis of hearing loss as well as the realization of appropriate interventions for the child and the family if both tests show failure in response (BRAZIL, 2012). The NHS includes the registration of cochlear-blink reflex, a response that is present in about 90% to 100% of normal people aurally. Thus, its absence should be investigated because it may be due to hearing disorders (DINIZ, 2007). The absence of cochlear-blink reflex with otoacoustic emissions may indicate retrocochlear alteration (ANGRISANI et al., 2012).

The Brazilian Committee on Hearing Loss in Childhood (CBPAI, 2000) proposed the implementation of Universal Newborn Hearing Screening (UNHS) for all children up to the age of three months (Joint Committee on Infant Hearing, 2000). And the Joint Committee on Infant Hearing (JCIH) advises that the audiological evaluation is performed on every newborn due to high incidence of changes in infants not included in the risk group indicator. When diagnosed hearing loss should be educational intervention at six months of age.

This study aimed to describe the incidence of faults in neonatal hearing screening of newborns in the maternity of Municipal Public Hospital in Macaé (HPMM).

SUBJECTS AND METHODS

We conducted a descriptive, quantitative, of secondary basis in maternity of Municipal Public Hospital in Macaé (HPMM) in records of newborns who were Rooming and Neonatal Intensive Care Unit, between January and October 2013.

The study is linked to the research project, called "PET Redes Saudi", part of the National Programme of Reorientation of Vocational Training in Health (Pro-Health) and the Education Program at Work for Health (PET Health/Care Networks, 2013-2015) approved to be developed at UFRJ - Macaé Teacher Aloisio Teixeira.

The Education Program at Work for Health – Health PET is regulated by Ministerial Decree No. 421 of 03 March 2010, providing scholarships holdres for tutors, mentors (professional services) and scholarships (graduate students) in the health field.

Scholarship holders trained, collected in a structured form, prepared for the research, data charts of all newborns who underwent TAN with TEOE, with equipment Neuro-Audio-Screen Neurosoft between January and October 2013. In february the equipment was being repaired and therefore, few tests were performed.

The variables collected were: failure of the TEOE tests (taking into account the results of "passed" or "failed" in TEOE) as governing the screening protocol of the hospital.

Data were entered, consolidated and analyzed based on absolute and relative distribution, using Microsoft Excel 2010 software.

The project was approved by the Ethics Committee of the Faculty of Medicine Campos dos Goytacazes.

RESULTS AND DISCUSSION

The study analyzed 1321 examinations of TEOE were performed in newborns in maternity HPMM between January and October 2013.

In January, the 120 examinations performed on neonates, if-detected 5% failure. In February the equipment was being repaired, so only 26 tests were made and without fault detection. In March, the 135 tests performed, 8% of faults were found. In April, the 144 examinations, 16% were detected-faults. In May, the 160 tests performed, 7.5% were detected fault. In June, the 156 examinations, 18% of faults were detected. In July, the 151 tests, 12% were detected-faults. In August, the 118 examinations, 11% were detected-faults. In September, the 142 tests, 9% of failures were observed. In October, the tests 169, 10%-detected faults (Table 1).

Table 1. Percentage distribution of failures of Transient evoked otoacoustic emissions (TEOE) in neonates of Municipal Public Maternity Hospital of Macaé. January/October, 2013.

	Failures	
Month	n total	%
January	120	5.0
February*	26	---
March	135	8.0
April	144	16.0
May	160	7.5
June	156	18.0
July	151	12.0
August	118	11.0
September	142	9.0
October	169	10.0

* Equipment was being repaired, so a smaller number of tests.

Results show percentage of failures above 10% in the months of April, June, July, August and October, it is important to re-test and check the results for routing the realization of Brain Stem Evoked Potentials.

Permanent hearing impairment, in accordance with the European Consensus on Newborn Hearing Screening is defined as the average of hearing thresholds at frequencies 500, 1000 and 2000 Hz is greater than 40 dB bilaterally (BRASIL, 2006; BRASIL, 2004).

The World Health Organization (WHO) estimates that 10% of the world population have hearing loss, so there are about 120 million people worldwide with hearing impairment, of which 8.7 million aged between 0 and 19 years. It detects that six in every thousand children with hearing loss at birth and that one in a thousand becomes deaf before reaching adulthood (HELP FOR HEARING LOSS, 2004).

Therefore consists of a serious public health problem affecting 1-6 per 1000 live births and normal 1-4 per 100 newborns treated in neonatal intensive care, according to data from different epidemiological studies published. If we consider the partial sensorineural losses, the incidence in normal live births reaches 6-8 per 1000 (AMERICAN ACADEMY OF PEDIATRICS, 2000).

By constitute a problem of great impact on the children's group, became mandatory, by current knowledge, detection of loss within the first 3 months of life, to appropriate care before 6 months, it is essential to establish a program screening for deafness.

In Brazil, according to the Law 12,303/10 is the obligation of all maternity hospitals in the country and the realization of TEOAE (also known as "test of the little ears"), children born in their dependencies. The literature suggests that the NHS is held in all children, regardless of the risk factor is associated or not in each case (HILÚ; ZEIGELBOIM, 2007).

This requirement aims for prevention of intellectuals and social losses later in life of a person who is born with hearing impairment. The test is simple, quick and painless and noninvasive. TEOE are recorded in the external auditory meatus spontaneously or by acoustic stimulation. Yet research on the parameters evaluated in the test so that the references were more reliable in the diagnostics performed from the responses obtained (DINIZ, 2007) were necessary.

Functional diagnosis and rehabilitation are part of an ongoing process, with the goal of achieving what is expected in cases of permanent hearing loss in children. In addition to testing and re-testing following the development of hearing and language (BRASIL, 2012) is necessary.

In this sense, it is of fundamental importance, therefore, perform the TEOE in infants before 6 months, since this is the critical period for the child with the diagnosis of hearing impairment.

CONCLUSION

The percentage of failures in the examination of TEOE in neonates was high. It is important that the re-test and audiological monitoring of children who failed the assessment occurs, for defining diagnosis and appropriate intervention. It is necessary to conduct further studies to understand the factors related to these findings as well as knowing the reference and counter reference to possible cases of hearing loss.

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"PET REDES SAUDI": FAILURES OF EXAMINATION OTOACOUSTIC EMISSIONS IN NEWBORN HEARING SCREENING OF A MATERNITY – MACAÉ/RJ.

ABSTRACT

Early identification of hearing impairment, which may adversely affect the quality of human life, is performed from the newborn hearing screening (NHS), if possible, even on maternity. This study aimed to describe the incidence of faults in neonatal hearing screening of newborns in the maternity ward of the Municipal Public Hospital in Macaé (HPMM). We conducted a descriptive study, of secondary basis in maternity of Municipal Public Hospital in Macaé (HPMM), between January and October 2013. Results of transient evoked otoacoustic emissions (TEOE) were collected from medical records of newborns Rooming and were in the Neonatal Intensive Care Unit. Data were analyzed from the relative distribution, using Microsoft Excel 2010 software. The study analysed 1321 TEOE test were performed in newborns in maternity HPMM between January and October 2013. In January, the 120 tests, were detected 5% of failures. In March (n=135), 8% of faults were found. In April (n=144), 16% were detected faults. In May (n=160), 7.5% detected faults. In June (n=156), 18% of faults were detected. In July (n=151), 12% were detected faults. In August (n=118), 11% were detected faults. In September (n=142), 9% of failures were observed. In October (n=169), 10% of detected faults. It is concluded that the percentage of failures in the examination of TEOE in neonates was high. It is necessary to conduct further studies to understand the factors related to these findings as well as knowing the reference and counter reference to possible cases of hearing loss.

KEYWORDS: Hearing Test, Children's Health, Hearing Health.

"PET REDES SAUDI": PANNES D'ÉMISSIONS EXAMEN OTOACOUSTIQUES DANS NAISSANCES AUDIENCE PROJECTION D'UN MATERNITÉ – MACAÉ/RJ.

RÉSUMÉ

Identification précoce des troubles, qui peuvent nuire à la qualité de la vie humaine entendre, est effectuée a partir du dépistage de la surdité néonatale, si possible, même sur la maternité. Cette étude visait à décrire l'incidence des défauts de dépistage de la surdité néonatale des nouveau-nés à la maternité de l'hôpital public municipal à Macaé (HPMM). Nous avons effectué une étude descriptive fondée sur la maternité secondaire hôpital public municipal à Macaé (HPMM), entre Janvier et Octobre 2013 Résultats de transitoire évoqué oto-émissions acoustiques (TEOEA) ont été recueillies a partir des dossiers médicaux de nouveau-nés de chambres et étaient dans l'unité de soins intensifs néonatals. Les données ont été analysées a partir de la distribution relative, en utilisant le logiciel Microsoft Excel 2010. L'étude a analysé 1321 test de TEOEA ont été effectuées dans les nouveau-nés dans HPMM de maternité entre Janvier et Octobre 2013. À Janvier, les 120 tests, ont été détectés 5% des défaillances. En Mars (n=135), 8% des défauts ont été trouvés. En Avril (n=144), 16% ont été détectés des défauts. En mai (n=160), 7,5% défauts détectés. En Juin (n=156), 18% des défauts ont été détectés. En Juillet (n = 151), 12% ont été détectés des défauts. En Août (n=118), 11% ont été détectés des défauts. En Septembre (n=142), 9% des défaillances ont été observées. En Octobre (n=169), 10% des défauts détectés. On en conclut que le pourcentage d'échecs lors de l'examen de TEOEA les nouveau-nés a été élevé. Il est nécessaire de mener d'autres études pour comprendre les facteurs liés à ces résultats ainsi que de savoir la référence de référence et de contre à d'éventuels cas de perte d'audition.

MOTS-CLÉS: Test d'audition, La santé des enfants, La santé auditive.

"PET REDES SAUDI": FALLAS DE EMISIONES DE EXAMEN OTOACÚSTICAS EN RECIÉN NACIDOS AUDIENCIA DE DETECCIÓN DE UNA MATERNIDAD – MACAÉ/RJ.

RESUMEN

La identificación temprana de la discapacidad, lo que puede afectar negativamente a la calidad de la vida humana de la audición, se realiza desde el screening auditivo neonatal, si es posible, incluso en la maternidad. Este estudio tuvo como objetivo describir la incidencia de fallas en el cribado auditivo neonatal de recién nacidos en la sala de maternidad del Hospital Público Municipal en Macaé (HPMM). Se realizó un estudio descriptivo basado en la maternidad secundaria Hospital Público Municipal en Macaé (HPMM), entre enero y octubre de 2013. Resultados de evocadas transitorias emisiones otoacústicas (ETEO) se obtuvieron de los registros médicos de los recién nacidos de Huespedes y estaban en la Unidad de Cuidados Intensivos Neonatales. Los datos fueron analizados a partir de la distribución relativa, utilizando el software Microsoft Excel 2010. El estudio analizó 1.321 pruebas ETEO se realizaron en los recién nacidos en la maternidad HPMM entre enero y octubre de 2013. En enero, las 120 pruebas, se detectaron 5% de los fallos. En marzo (n=135), se encontraron 8% de las fallas. En abril (n=144), el 16% se detectaron fallas. En mayo (n=160), el 7,5% detectado fallas. En junio (n=156), se detectaron 18% de las fallas. En julio (n=151), el 12% se detectaron fallas. En agosto (n=118), el 11% se detectaron fallas. En septiembre (n=142), se observaron 9% de los fallos. En octubre (n=169), 10% de las fallas detectadas. Se concluye que el porcentaje de fracasos en el examen de ETEO en neonatos era alta. Es necesario llevar a cabo más estudios para entender los factores relacionados con estos hallazgos, así como saber la referencia y contra referencia a posibles casos de pérdida de audición.

PALABRAS CLAVE: Prueba de Niños, Salud Infantil, Salud de Audición.

"PET REDES SAUDI": FALHAS NO EXAME DE EMISSÕES OTOACÚSTICAS NA TRIAGEM AUDITIVA NEONATAL DE UMA MATERNIDADE PÚBLICA EM MACAÉ/RJ.

RESUMO

A identificação precoce de alterações auditivas, que podem interferir negativamente na qualidade de vida do ser humano, é realizada a partir da triagem auditiva neonatal (TAN), se possível, ainda na maternidade. Objetivou-se descrever a incidência de falhas na triagem auditiva neonatal de recém-nascidos na maternidade do Hospital Público Municipal de Macaé (HPMM). Realizou-se um estudo descritivo, de base secundária na maternidade do Hospital Público Municipal de Macaé (HPMM), entre janeiro e outubro de 2013. Os resultados das Emissões Otoacústicas Evocadas por Estímulo Transiente (EOAT) foram coletados nos prontuários de recém-nascidos que estavam em Alojamento Conjunto e na Unidade de Tratamento Intensivo Neonatal. Os dados foram analisados a partir da distribuição relativa, utilizando-se o software Microsoft Excel 2010. Foram realizados 1321 exames de EOA em recém-nascidos na maternidade do HPMM, entre janeiro e outubro de 2013. Em janeiro, dos 120 exames realizados, detectaram-se 5% de falhas. Em março (n=135), 8% de falhas foram encontradas. Em abril (n=144), detectaram-se 16% de falhas. Em maio (n=160), detectaram-se 7,5% de falhas. Em junho (n=156), 18% de falhas foram detectadas. Em julho (n=151), detectaram-se 12% de falhas. Em agosto (n=118), detectaram-se 11% de falhas. Em setembro (n=142), 9% de falhas foram observadas. Em outubro (n=169), detectaram-se 10% de falhas. Conclui-se que o percentual de falhas no exame de EOA nos neonatos foi elevado. É necessário realizar novos estudos para entender os fatores relacionados a esses achados bem como saber a referência e contra referência aos casos possíveis de perda auditiva.

PALAVRAS-CHAVE: Teste da Orelhinha, Saúde da Criança, Saúde Auditiva.