THE DIAGNOSTIC VALUE OF THE AURO-PALPEBRAL REFLEX

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The ear-, nose- and throat clinic at the University of Freiburg endeavours since 10 years to diagnose early a hearing impairment among children. The slightest hearing rest should be evaluated and utilized as early as possible, since development of speech begins already in the 2nd year of life. Paedo-audiometric methods and modifications thereof based on normal audiometry permit a rather rough or moderately accurate estimation of the hearing acuity in children 2—3 years old. When dealing with still younger children and sucklings, the hearing acuity may be judged from the responses to acoustic stimuli, the observation of speech-development and lastly with objective methods of hearing-tests. We had a satisfactory experience with the auro-palpebral reflex (lid-reflex) and to this purpose a special audiometer was constructed in 1952. This audiometer enabled us to examine a patient using a loud-speaker.

In the course of years we have regularly examined the hearing acuity of sucklings and young children with the help of the auro-palpebral reflex; several thousands of cases were tested. In the last year accurate audiometric check-ups were done on 100 children, who 6—10 years earlier, as sucklings, had only an acoustic test based on the lid-reflex. At an older age subjective information could be obtained and thus a reliable audiogram was recorded. This enabled us to evaluate the diagnostic value of the auro-palpebral reflex.

All children who originally had a positive lid-reflex and who showed a normal development of speech and did not have any ear disease later in life, demonstrated a practically normal hearing-acuity during the follow-up examination. Eight children with a variable degree of inner ear disturbance, who had suffered from an ear disease or an infectious disease (scarlet fever, mumps) during the 6—8 years following the first examination. Three children had a negative lid-reflex during the check-up examination. Of 20 children who originally showed a doubtfully positive or an uncertain negative lid-reflex, 8 were proven to be hard of hearing and one a case of unilateral deafness. The other children heard normally and had a positive reflex in the follow-up examination. 17 children, who more than 6 years ago showed a definitely negative lid-reflex and no signs of any hearing-ability whatsoever, nevertheless received audiologic training and regular audiometric check-ups.

In 6 cases deafness was demonstrated at a later date, so that enrolment into a school for hard of hearing children was necessary. Seven additional children showed a high degree of hearing impairment, of those 4 were

admitted to the School for Hard of Hearing Children in Freiburg/Br. The remaining children heard well (lid-reflex now positive).

Auro-Palpebral-Reflex 1952 till 1955	Audiogram 1962
63 x positive	55 x normal
	8 x hard of hearing
20 x doubtful	12 x normal
	8 x hard of hearing
17 x negative	6 x deaf
	7 x hard of hearing
	4 x normal

First examination at the age of 0—3 years.

Check-ups at the age of 9—12 years.

Essentially we found confirmation for our opinion expressed already in 1956: normal hearing is associated with a positive lid-reflex in almost 100% of the cases. On the other hand in cases of complete deafness a reaction was never observed. The percentage of positive cases decreases as the degree of hearing impairment increases; however, it is not feasible te determine the degree of hearing impairment with this method.

We are under the impression that otologists and audiologists tend, on the whole, to attach too much value to the individual hearing tests. Often, the anamnestic data are not satisfactory and too little attention is paid to the general development of the child, its behaviour, as well as to the general physical findings. On the other hand, the paedagogue or the non-medical examiner lacks the equipment required for this diagnostic procedure, and thus mistakes ensue on classifying the children for the different schools. Prior to 1950 we observed in Germany f.i. valuable hearing-rests among 60—70% of the children attending our regional School for the deaf. On the other hand, 47% of the children attending a/so-called "Auxillary School" were hard of hearing but not debilitated.

It is the task of the experienced audiologist to clarity the situation with the help of all the auxillary equipment at the modern audiologic centers. In his lecture on "The hard of hearing child" BECKMANN (1962) summarized the present attitude of the paedo-audiologist from the oto-audiologic point of view.

It would be advisable that the obstetrician should ask for a prophylactic hearing examination in predisposed children with congenital hearing impairment, anomaly, maternal rubeola during pregnancy, toxoplasmosis, lues, birth-trauma, asphyxia, prematurity and infections. It is also necessary that audiometric tests should be done on children after infectious discases and trauma. Parents should be introduced more properly into the problems of the hard of hearing child, as envisaged by HUIZING, EWING and others, thus parents may achieve a better sense of observation, seek an earlier otologic consultation and provide clearer anamnestic data.

With other methods of examination, such as behaviour and response of

the child, its reaction to acoustic stimuli, equilibrium- and X-ray-examinations, the acoustic lid-reflex appears to be especially useful to gain orientation on the hearing capacity of sucklings and very young children.

VALEUR DIAGNOSTIQUE DU RÉFLEXE AURO-PALBÉBRAL

Il y a 6 à 10 ans, que nous avons fait des examens auditifs de quelques milles nourrissons et petits enfants (max. 3 ans d'âge) par la méthode du réflexe cochléo-palpébral 100 de ces enfants - maintenant plus agés - étaient controlés encore une fois en 1962, non seulement par la méthode décrite mais aussi par l'examen audiométrique tonal et vocal. Sur 63 enfants avec un réflexe positif au premier examen il y en avait maintenant 55 dont l'audition était normale. Sur 8 de ces enfants — ayant eu une maladie infectieuse — nous avons trouvés une surdité sévère. Sur 20 enfants présentant autrefois un réflexe incertain, 12 entendaient normalement, 8 étaient sourds. Sur 17 enfants, dont les réflexes autrefois étaient négatif, 6 avaient maintenant une surdité complète, 7 d'eux une surdité sévère et 4 entendaient normalement.

En employant cette méthode simple et rapide chez les nourrissons et les petits enfants, on a la possibilité de differencer entre l'audition normale et la surdité sévère ou la cophose.

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