

TEOAE를 이용한 신생아 청각선별검사의 의의

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Significance of Newborn Hearing Screening Program Using TEOAE

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서 론

가

가

가 .

신생아 청각선별검사의 필요성

가 .

1000 1 3

700 가

¹⁾²⁾

Otoacoustic emission(OAE) 가

가 .

evoked otoacoustic emission transient evoked
otoacoustic emission(TEOAE) click tone
burst

가

³⁾

6

가

⁴⁾

가

2.5 가 ⁵⁾

11

17

⁶⁾

가

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evoked otoacoustic emission

1) stimulus stability measurement가 75% , 2) peak stimulus가 77~83 dBpk SPL, 3) stimulus spectrum , 4) noise level 40 dB SPL , 5) low noise sample 50 가

2) 5) peak stimulus가 83 dBpk SPL low noise sample 50 가

TEOAE protocol 가 TEOAE 4

click tone TEOAE

burst 20 msec TEOAE

transient evoked otoacoustic emission(TEOAE) TEOAE

distorsion product otoacoustic emission (DPOAE) 가 가 TEOAE가

8) TEOAE 30 dB TEOAE 4

sensitivity가 가 10) TEOAE

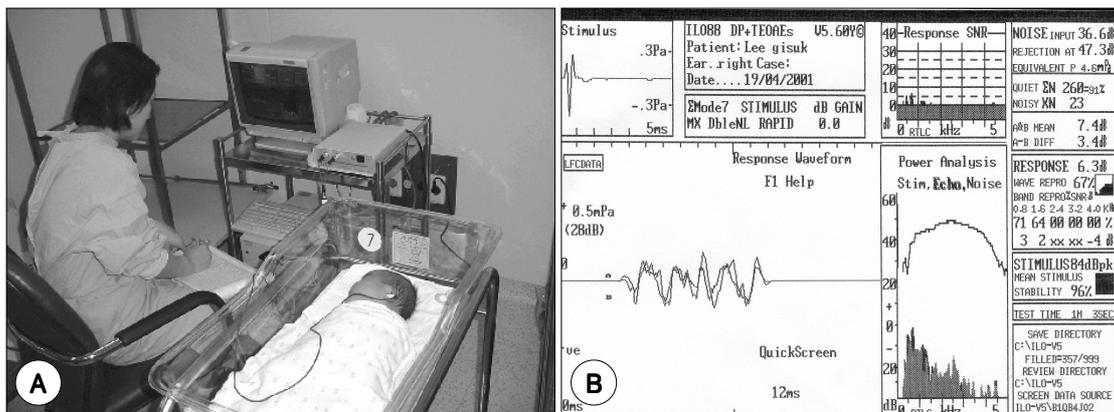


Fig. 1. Setting of newborn hearing screen in the well baby nursery (A) and the output of TEOAE test (B).

TEOAE probe
 , 2~3 가 (Fig. 1).
 referral rate가 . referral rate
 rate 1) 가
 , 2) 가
 , 3) probe , 2) probe 가
 , 3) 가 probe 가
 . 11)

아주대학교병원 신생아 청각선별검사 Protocol

1998 3 protocol(Fig. 2)

TEOAE ILO 92 system(Otodynamics, UK)

(Fig. 3). 가 1 3 TEOAE

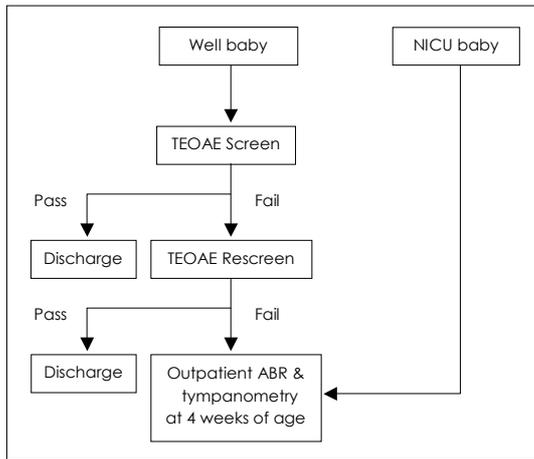


Fig. 2. Newborn hearing screen protocol of Ajou University Hospital.

TEOAE 4 . TEOAE . reproducibility가 50% 3 dB
 3 , reproducibility가 50% 3 dB
 , 3 3 dB 12)
 TEOAE 가
 4 tympanometry 60 dB
 6

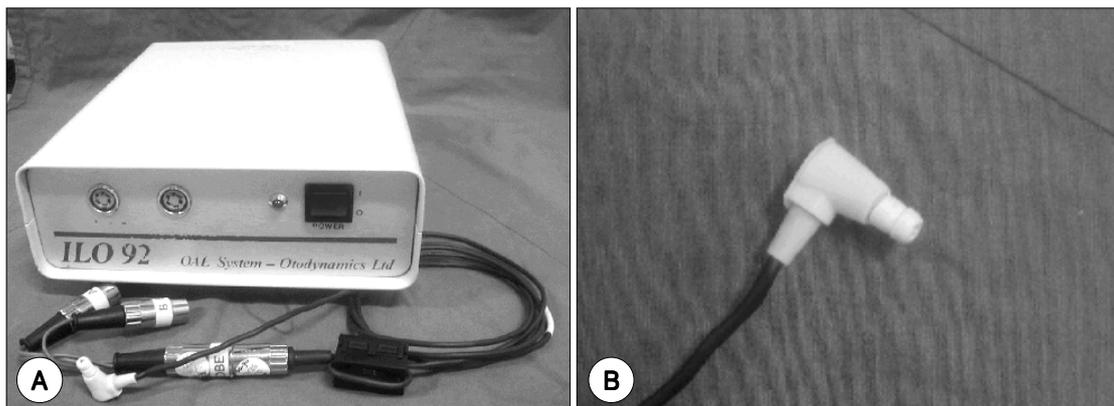


Fig. 3. The Echoport of ILO 92 system for newborn hearing screen using TEOAE (A) and probe (B).

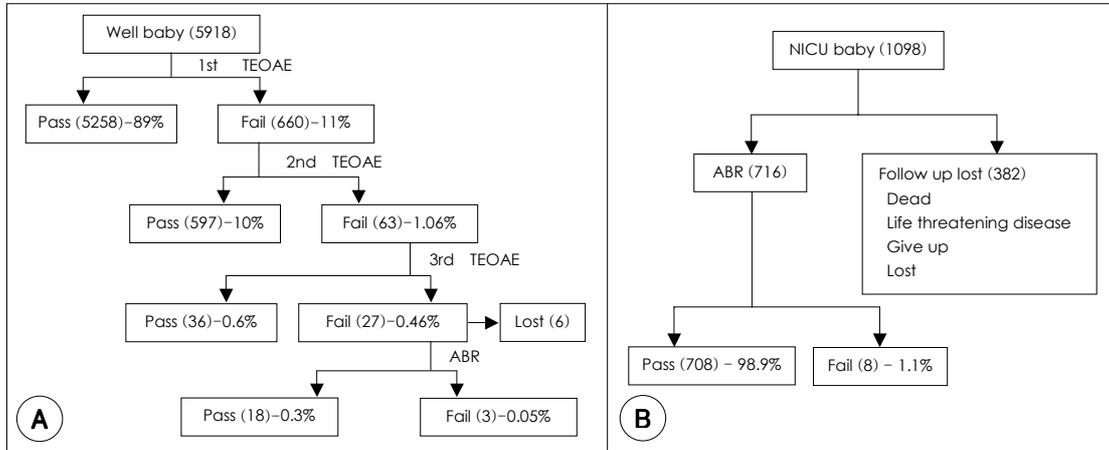


Fig. 4. Schematic results of Aju newborn hearing screen program for 6634 neonates including 5918 well babies (A) and 716 NICU babies (B).

tympanometry
 1998 3 2001 12 4
 7016 6634
 5918 TEOAE 1 2~3
 0.46% 27
 21 3
 (0.05%) 60 dB
 1098
 716 1.11% 4 6634
 8 60 dB 0.16% 11
 (Fig. 4). 6634 11
 (0.16%)
 4 90 dB
 4
 1 GJB2 , 1 가
 enlarged vestibular aque-
 duct¹³⁾ 2
 가
¹⁴⁾ 6634
 5300 가 1

8000 , 1
 470 가
결론
 TEOAE
 가
 1098
 6634
 0.16% 11
 가
 가
 가
중심 단어 :

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