

Hearing Evaluation at the End of Life

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Background:

One of the most frequent questions families ask when patients are at the end of life is “Can they still hear me?”

Those of us in medicine have long believed that hearing may be the last sense to go and have encouraged family members to speak with their loved one up until the very end.^{1,2,3}

Studies have been done on comatose patients to assess their awareness with promising results.^{4,5,6,7} However, not all comatose patients are actively dying so it is necessary to assess the actively dying patient to see if the sense of hearing is truly “the last sense to go”—a long standing belief.

Objectives:

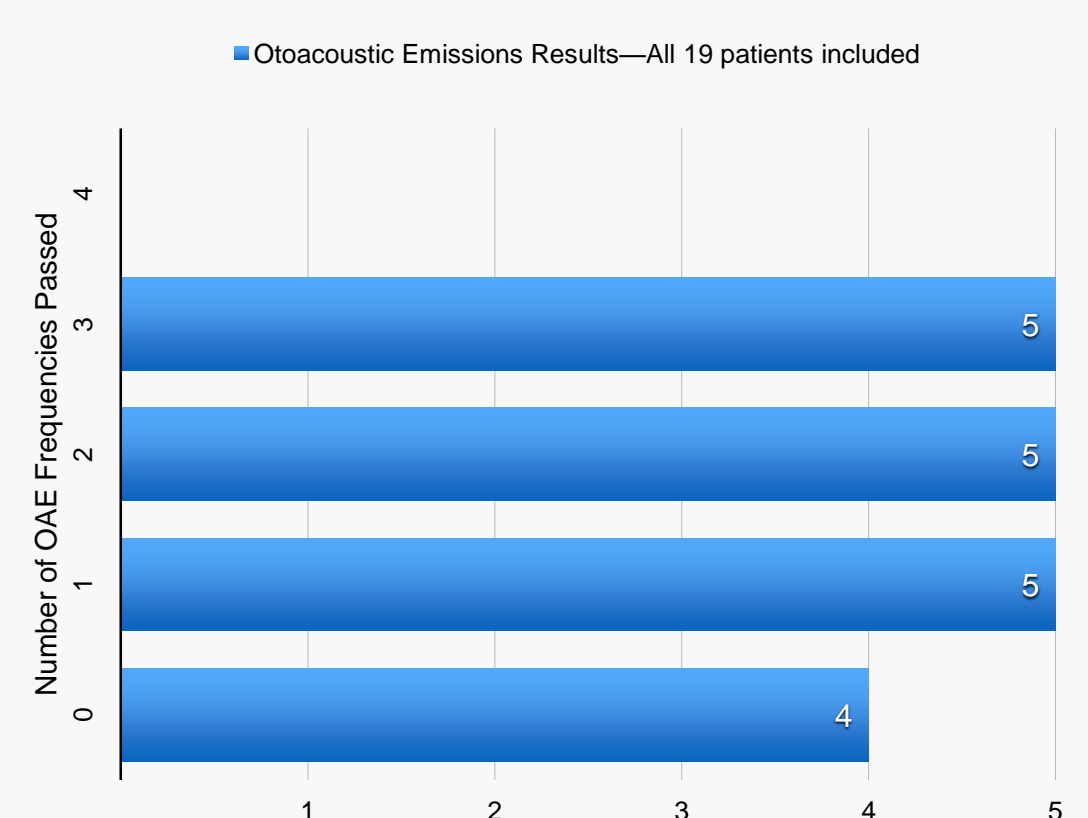
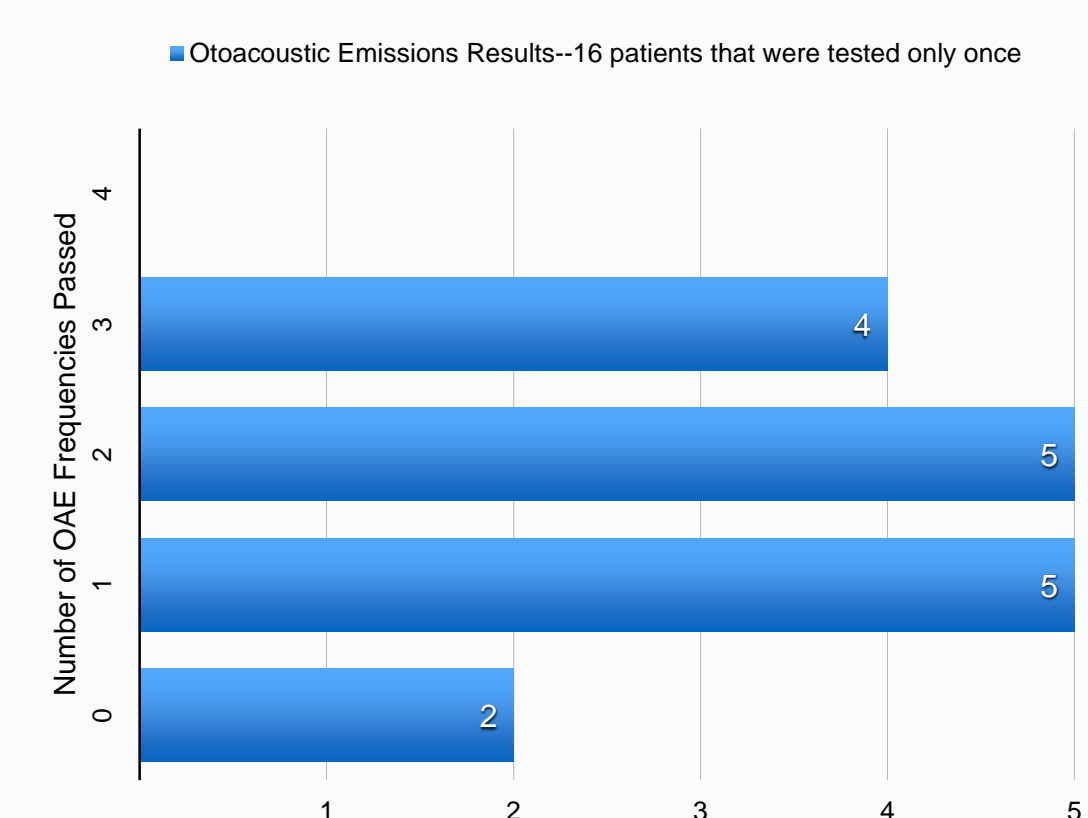
The goal of this study was to focus on unconscious patients in their last days/hours of life to begin to answer the question families ask, “Can they still hear me?”

Methods:

- All patients over the age of 18 admitted to the inpatient unit at Rainbow Hospice Ark were eligible for the study. Each patient’s Palliative Performance Score (PPS) was monitored until they were 10%.
- When a patient was at PPS-10% and they were no longer responsive to voice/gentle tactile stimuli (and with consent of HPOA) the patient was entered into study.
- Hearing evaluation was done using Otoscope, Tympanometry and Otoacoustic Emission Test (OAE’s).

Results:

- Twenty-six patients were enrolled in study over a 4 month time period.
- 16 female and 10 male, ages ranged from 51-95 years.
- “Hard of Hearing” was reported by 5 patients’ families.
- 19 patients were able to have Otoacoustic Emission (OAE) evaluation and three of these patients had OAE’s repeated on different days.
- 16 patients were tested only once—only 4 of these patients passed 3 out of the 4 frequencies tested (see chart)
- When the 3 patients that were tested on multiple days are included, then 5 patients passed 3 out of the 4 frequencies tested (see chart)



Discussion:

The question families ask, “Can they still hear me?” is not an easy one to answer. While healthcare professionals have long believed that patients can still hear until the very end, this may not be the case.

OAE’s were chosen for this study because the test is quick, non-invasive, easy to administer and is unaffected by cognition. A pass outcome is reported when OAE’s are present for the majority of test frequencies (3 out of 4).⁸

Only 5 out of 19 patients (26%) evaluated passed a majority of test frequencies.

This study is only the first step in hearing evaluation. OAE’s are not a complete test of hearing—hearing involves high level auditory processing and more testing is necessary for full hearing assessment.

This study was also limited by its small sample size, so no definitive conclusions can be drawn. Is it possible that a patient who passed only 2 out of 4 frequencies may still be able to hear their loved ones? I would like to believe this is true. Further work needs to be done to definitively answer the

References:

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