

## Surgical Result of Laser Stapedotomy in Otosclerosis Patients

The level of proximity of the improved air conduction hearing after laser stapedotomy in otosclerosis patients to the bone conduction hearing prior to surgery (A theoretical limit of hearing that can be improved by surgery)

### Definitions

- ◆ **Otosclerosis:** Hearing loss caused by the fixation of auditory ossicles due to bone remodeling between the middle ear and the inner ear.
- ◆ **Laser stapedotomy:** A procedure in which the incus and the stapes are separated for the removal of stapedial suprastructure, and after making a hole on the fixed stapedial footplate using laser, a piston wire prosthesis is placed on the incus or the malleus then positioned on the hole made on the stapedial footplate. The purpose is to relay the vibration energy transferred through the eardrum to the cochlea via the incus/malleus and the piston wire prosthesis.
- ◆ **Surgical result estimation and evaluation:** Postoperative 6-month air conduction hearing threshold- preoperative bone conduction hearing threshold.
  - Best result: <10dB
  - Good result: ≥10dB and <20dB
  - Fair-to-poor result: ≥20dB



### Interpretation

- ◆ Our hospital performs the most laser stapedotomy in Korea, and the number of reoperation and very advanced patients has increased, resulting in slight changes in grades, but performing well without significant changes.

### Improvement

- ◆ Preoperative conference for thorough preview of the temporal bone image.
- ◆ Postoperative confirmation of bone conduction hearing to determine the cases requiring steroid administration for effective protection of the inner ear.

Data source SNUBH EMR (Electronic Medical Record)