Abstract:

In a prospective study, 165 total stapedectomies and 152 small fenestra stapedotomies were performed by three experienced surgeons between 2001 and 2003. In total stapedectomy, a self-made Schuknecht steel wire connective tissue prosthesis, and in stapedotomy, a 0.6-mm platinum wire Teflon piston was used. The pre- and postoperative bone conduction thresholds were compared at the frequencies 250 Hz, 500 Hz, 1 kHz, 1.5 kHz, 2 kHz, 3 kHz and 4 kHz. The postoperative bone conduction between 250 Hz and 3 kHz was significantly better in the total stapedectomy group than in the stapedotomy group. At 4 kHz, both groups showed a slight decrease in bone conduction but the difference was not statistically significant. Therefore, especially in cases with preoperative moderate sensorineural hearing loss, we recommend total stapedectomy using a Schuknecht steel wire connective tissue prosthesis, which offers a stapes-perilymph interface similar to the normal stapes.