Survey of the Results of Surgical Treatment of Otosclerosis

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ABSTRACT

Background and objectives: Otosclerosis is the most common cause of conductive hearing loss in population between the ages of 15 to 50 years. The treatment of otosclerosis has been largely restricted to surgical efforts to reconstruction of the conductive hearing loss. Stapedectomy and stapedotomy have been the common surgical techniques for clinical otosclerosis and have a high success rate. Objective of this study was to investigate the results of the surgical treatment of otosclerosis.

Materials and Methods: We did a retrospective study of 50 patients who had undergone stapes surgery. Among these 50 patients, 39 cases at Tehran Amir Alam hospital and 11 cases at Tabriz Emam Khomeini hospital, had been operated by a single surgeon. 32 cases were stapedotomy and 18 Cases were stapedectomy.

Results: 32% of patients had pre-operative air-bone gap of more than 40dB, the post-operative air – bone gap closure was ≤ 10dB in 76% and ≤ 20dB in92%. The average closure of the air-bone gap was 28.4dB at mean speech frequencies. The minimum closure of the air – bone gap was 15.66dB in 4000 Hz and the maximum of it was 34.2 in 500Hz. There were no meaning statistical differences between surgical technique and also intraoperative problems and complications and the closure of the air – bone gap.

Conclusions: There was adequate closure of the air – bone gap after surgery in all frequencies and if was higher in lower frequencies. there was a close relationship between the pre- and post – operative air – bone gap in all frequencies. In the larger pre-operative air – bone gap, the closure of the post operative air- bone gap at these frequencies was more.

Key words: Otosclerosis, Stapedectomy, Stapedotomy, Conductive hearing loss.