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The efficacy of one-stage tympanoplasty with mastoid obliteration and a tympanoplasty by an endaural approach using ceramic prosthesis

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Purpose: To confirm the efficacy of one-stage tympanoplasty with mastoid obliteration and a tympanoplasty by an endaural approach using ceramic prosthesis

Materials and Methods: Our surgical procedure for middle ear was performed on 163 patients with cholesteatoma and 545 patients with chronic otitis media in Shinkawa Clinic between Jun 2001 and December 2005. The operative method was classified into two groups. We use one-stage tympanoplasty with mastoid obliteration, a canal wall down procedure for chronic otitis media with cholesteatoma and chronic otomastoiditis. On the other hand, we use a tympanoplasty by an endaural approach for chronic otitis media without chronic otomastoiditis. The ossicular chain was reconstructed using the ceramic ossicular prosthesis (P-type and T-type). We performed modified Type III tympanoplasty using the P-type ceramic when the superstructure of the stapes could be utilized, while we performed modified Type IV tympanoplasty using the T-type ceramic when the superstructure of the stapes could not be used.

Results: In chronic otitis media with cholesteatoma and chronic otomastoiditis, the success rate of modified Type III tympanoplasty using ceramic P type was 77.8%, on the contrary that of modified Type IV tympanoplasty using ceramic T type was 70.6%. In chronic otitis media without chronic otomastoiditis, the success rate of modified Type III tympanoplasty using ceramic P-Type was 69.8%, while that of modified Type IV tympanoplasty using ceramic T was 69.1%.

Conclusion: Our results show that there are no significant differences of success rate between these two procedures. Therefore, we confirmed that the use of ceramic implant was satisfactory for both one-stage tympanoplasty with mastoid obliteration and a tympanoplasty by an endaural approach.