The goals in the surgery of chronic otitis media are to gain control of infection, closure of the tympanic membrane defects and hearing rehabilitation via ossicular chain reconstruction. It is desirable that aerations be restored in the mastoid cavity after ear surgery because a well-aerated mastoid is considered to be important for maintaining middle ear pressure and a large air-buffer space in the middle ear, enabling gas-exchange function through the mucosa. In the present investigation, correlations between the postoperative state of middle ear aeration and long silastic sheet insertion was retrospectively evaluated in order to identify this surgical procedures suitable for middle ear aeration recovery.

MATERIALS & METHODS

Between January 2003 and May 2007, 46 patients underwent the planned two-stage canal wall up tympanomastoidectomy. During the first stage operation, it is useful to operate in chronic middle ear disease with extensive middle ear mucous membrane disease, in cases with absence of ossicular chain reconstruction. It is desirable that aerations be restored in the mastoid cavity after ear surgery because a well-aerated mastoid is considered to be important for maintaining middle ear pressure and a large air-buffer space in the middle ear, enabling gas-exchange function through the mucosa. In the present investigation, correlations between the postoperative state of middle ear aeration and long silastic sheet insertion was retrospectively evaluated in order to identify this surgical procedures suitable for middle ear aeration recovery.

In the 46 total cases, there were 15 cases with suppurative otitis media, 20 cases with attic cholesteatoma, 9 cases with adhesive otitis media, 1 case with cholesterol granuloma and 1 case with tuberculous otitis media. During the average follow-up of 31 months, there was 1 recurred chronic otitis media which was finally revealed tuberculous otitis media. Intact tympanic membrane was obtained in 45/46 patients. In CT grading, middle ear aeration was increased significantly(p<0.05)(Fig. 3). Air-bone gap was significantly decreased after the staged operation, preoperative average ABG was 29.7 dB and postoperative follow-up average ABG was 21.0 dB(p<0.05)(Table 2). But Eustachian function using Valsalva maneuver was not significantly changed(p>0.05).

CONCLUSIONS

An intended two-staged tympanomastoidectomy is recommended to in cases with extensive middle ear mucous membrane disease, in cases with absence of all ossicular tissue and in cases in which there is uncertainty regarding the eradication of cholesteatoma. In this investigation, the staged operation was performed in cases with poor prognosis but, there were good results in postoperative ear drum state, hearing improvement after ossiculoplasty( Polycel®) and middle ear aeration. There were no other major complications except 1 recurred case (tuberculous otitis media) in conclusion, long silastic sheet insertion from mastoid to middle ear is useful to operate in chronic middle ear disease with poor mastoid aeration. We are currently pursuing a long-term study in this larger series of patients to further examine the efficacy of this technique.

REFERENCES