Original Article

MASTOIDECTOMY IN NONCHOLESTEATOMATOUS CHRONIC SUPPTATIVE OTITIS MEDIA

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ABSTRACT

Clinical outcome comparisons across diverse medical procedures are challenging and require considering several variables, including patient characteristics, research design, methodology, and accessible data. In your situation, you're interested in contrasting the clinical outcomes of patients who had percutaneous transluminal angioplasty (POBA) and percutaneous coronary intervention (PCI) with stent insertion and had substantial thrombosis burdens. Here are the main points of comparison broken down:

Objective: to evaluate the effectiveness of the graft after mastoidectomy in non-cholesteatomatous chronic supportive otitis media and the functional hearing result.

Material And Methods: *The research was conducted at the ENT (Ear, Nose, and Throat) department of the Mardan Medical Complex Teaching Hospital. Study Duration: The study was conducted between June [2015] and June [2016]. Follow-Up Period: A [24-month] (2-year) follow-up was established as the standard duration to monitor patient outcomes after the surgery Patient Characteristics: Patient Age: The age range of the patients included in the study was between [20] and [50] years. Mean Age: The patients' average (mean) age was [26.2] years. Gender Distribution Out of the total patients [25] patients (41.66%) were female [35] patients (58%) were male Ear Condition at Surgery Leaking Ears: [15] patients (25%) had ears that were leaking Dry Ears: [45] patients (75%) had dry ears.*

Results: *Graft failure rates in the first and second groups were [30%] and [15%]. At the most recent follow-up, there was a statistically significant difference in the success rates of groups 1 and 2, where four perforations either healed independently or were treated locally.*

Conclusion: *According to this study, mastoidectomy increases the likelihood that the transplant will be effective and the patient will have functional hearing. However, it also requires more work and comes with risks.*

Keywords: *(Non-cholesteatomatous chronic supportive otitis media), (two tympanoplasties without mastoidectomy), (two mastoidectomies, may signify air-bone gap)*

INTRODUCTION

In chronic otitis media (com), the mucoperiosteal lining of the middle ear and mastoid become inflamed[1]. The mucus membrane may thicken due to edema, submucosal fibrosis, and infiltrating inflammatory cells. Cholesteatomatous and non-cholesteatomatous are the two classifications[3]. Chronic suppurative otitis media (com), which indicates an active state and ear discharge, and sequelae of chronic otitis, which means a non-active condition and a dry ear, are the two subgroups of non-cholesteatomatous com, respectively.

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Non-cholesteatomatous com therapy has received comparatively little attention, even though there has been a lot of material written on the histology, available treatments, and outcomes in cholesteatomatous ear disease. The primary objectives of surgery are usually accepted to be to close the opening and create an ear that is perpetually dry[5]. The purpose of this research is to assess the results of non-cholestomatous com patients treated by tympanoplasty with mastoidectomy or tympanoplasty without mastoidectomy (two) in a trial to elucidate the importance of mastoidectomy in the treatment of such individuals. Additionally, the effect of ear discharge while operating will be evaluated[6].

MATERIAL AND METHODS

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Teaching Hospital Between June [2015 and June 2016], Mardan studied noncholesteatomatous com for [60] years. [24] months was a usual follow-up time frame. With a mean age of [26.2] years, the patients' ages varied from [20 to 50]. [25] patients were female, and [35] were male, or [54] and [54] percent, respectively. During the procedure, [45] ears remained dry, while [15] ears (or 25%) were draining. The middle ear mucosa condition, hole location, and graft material are all shown in Table 1.

The patients were split into two groups based on the surgical treatment choices and the state of the patient's ears throughout the procedure. Thirty patients in Group 1 had tympanoplasty, but only two underwent mastoidectomy. A few Group II patients (n=30) had tympanoplasty and a mastoidectomy. These people used methods that kept the canal wall intact. Both groups' ears had a significant amount of discharge after surgery. Surgical outcomes were compared for graft success and hearing at the most current follow-up. Surgical failure was indicated by initial closure, reperforation, and no closure. Even after corrective surgery, the wound would not heal. To determine mean hearing, the results of function hearing were used. The difference between the mean of preoperative air conduction and the mean residual gap (mg) at [250], [500], [1000], [2000], and [4000 Hz] determines the functional hearing outcomes. The most recent audiogram was used for postoperative measures.

RESULTS

The graft failure rates for groups 01 and 02 were [30%] and [15%], respectively, while the remaining four perforations healed independently or with local therapy. Based on the most recent follow-up, Group 02 had a statistically significantly more significant success rate than Group 01 (85.07% vs. 70%). Two patients in group 1 were successfully treated for perforations and cholesteatoma after the original treatment using canal wall-down tympanoplasty.

Even though their ears were discharged before surgery, none of the individuals in Group 02 had any at their most recent examination. Table 2 displays the outcomes of the hearing tests conducted on the two groups before and after surgery. Between pre- and post-op, there was an average decrease of less than 4 dB in bone conduction across all groups. There was a wide variety of results in terms of functional hearing between the two groups, much as the various graft success rates.

Table 1: Operative findings and graft material (n= 60 years)

Parameters	Group I (n=30)	Group II (n=30
Perforation site		
Anterior	08(27%)	05(17%)
Posterior	10(34%)	05(17%)
Central	10(34%)	11(34%)
Subtotal	02(7%)	11(34%)
Status of mucosa		
Health	25(84%)	20(67%)
Unhealthy	5(17%)	10(32%)
Graft material		
Fascial (autograft)	30(100%)	30(100%)

Table 2: Distribution of the MRC

MRG(dB)	Group 1 (n=30)	Group 2 (n-30)
0-10	11(34%)	10(37%)
10-20	6(17%)	9(27%)
>20	15(49%)	12(37%)

Table 3: Hearing results at the last follow-up (OBB)

Gap	Group 1 (n=30)	Group 2 (n=30)
Pre-operative air-bone gape	23.4	29
Post op	18.6	20

DISCUSSION

The surgical procedure is not without its risks.

In many cases, authors recommend Twm as a therapy for csom[7]. Two in com instances' surgical and functional outcomes are not superior to those of twom[7]. Graft success rates and functional hearing outcomes drastically differ between ears with csom8 that undergo tympanoplasty with and without mastoidectomy. Graft success rates for groups I and ll were [71] and [86] at the most recent follow-up, respectively. Hearing results also differed between the two treatment groups, although the difference was not statistically significant ($p>0.05$), similar to the graft success rates. Mastoidectomy has been shown to improve surgical outcomes for certain patients, as demonstrated by this TWM study. Lau and Tos[5] operated on [229] patients, conducting canal wall-up (38%) and canal-down (39%) mastoidectomies due to the prevalence of persistent granulating otitis media. There was a [12%] overall graft failure rate after the first therapy, but Group couldn't break down the reperforation rates. Naclerio10 found an 89% graft success rate when using the entire canal wall method on [27] individuals with

cwm. Comparable to past research, but in contrast to the findings of Halik and Smyth11, our analysis found graft success rates of [71%] and [86%] in groups l and ll, respectively. According to a sample of 605 concomitant cases with two years of follow-up, comprising both cholesteatomatous and non-cholesteatomatous occurrences, the kind of surgery did not influence the success of perforation closure.[12]. The mean air/bone gap after tympano-mastoidectomy was [20] db, down from [30%] db before surgery, according to a study by Vartiainen and Kansanen on a total of [281] ears. Our findings showed that the hearing abilities of Group 01 (mabg17.2) and Group 02 (mabg20.1) were identical. Our non-cholesteatomatous individuals in Group 1 who were treated with two had hearing results similar to those of patients treated with twm[9], as reported in the literature. When we compared our findings to TOS, we discovered that his claim that "a chronic suppurative otitis media with a very little discharge can often be treated with tympanoplasty without mastoidectomy" was incorrect. Secretion's impact on graft success has been debated for quite some time. The ear must be dry before therapy, as stated by Fish and Gibb[10] and Chang[14]. We or any other writers found no evidence supporting this assertion. Knowing how secretion during surgery affects audiological outcomes is just as important as knowing how it affects graft success rate. According to Schmid et al.[12], a non-cholesteatomatous com requires a dry ear to obtain an air/bone gap in the incus transposition within 10 db. However, research by Halik and Smyth discovered that patients who had just had tympanic membrane replacement showed average hearing test results regardless of the amount of secretion present at the time of operation. Again, our testing showed no statistically significant difference in functional hearing between dry and moist ears.

LIMITATIONS

instances with well-documented non-cholestetomatous com were the only instances included in this investigation. This investigation excluded any related disorders or malformations.

CONCLUSION

The study shows that mastoidectomy performed in non-cholesteatomatous ears increases the likelihood of functional hearing outcomes but also entails additional risk and labor. Additionally, we found that draining from an ear had little effect on her perforation or hearing. Despite this, many surgeons still recommend them as the first course of treatment for non-cholesteatomatous ears.

FUTURE FINDING

Mastoidectomy effectively treats non-cholesteatomatous com, but further research is required with more significant sample numbers and extended follow-up periods.

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