

CONVENTIONAL MASTOID BANDAGE FOLLOWING OTOLOGICAL SURGERIES - IS IT NECESSARY?

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ABSTRACT

BACKGROUND

Mastoid pressure bandage post otological surgeries are usually applied to prevent post-operative wound haematoma and proper wound cover. Many other materials (e.g. Micropore, Dynaplast) are used instead of conventional bandage.

AIMS

The purpose of this study was to assess whether compressive head bandages are necessary after ear surgery to prevent complications such as haematoma or wound infection.

METHODS

A hospital based study of 50 patients (30 males & 20 females) who underwent tympano-mastoidectomies, were selectively applied different types of mastoid bandages, following which their advantages & disadvantages post-operatively (early & late) were studied.

RESULTS

Out of 50 cases, in which 15 cases were applied conventional mastoid bandage resulted in 4 complications (26.66%). Whereas out of 20 cases of Dynaplast bandage, only 2 showed minor complications (10%) with only pain during removal of this bandage. Out of 15 cases where Micropore was used as bandage, only 2 showed up with minor complications (13.33%) with only pain during removal of Micropore.

KEYWORDS

Pressure dressing, Mastoid bandage, Dynaplast, Micropore, Tympano-mastoidectomy.

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INTRODUCTION: Mastoid pressure bandage post otological surgeries are usually applied to prevent post-operative wound haematoma and proper wound cover. But such dressing is usually uncomfortable for patients and may lead to other unwanted complications. Of late, many other materials (e.g. Micropore, Dynaplast) are used instead of conventional bandage. This study was aimed to evaluate the advantages and disadvantages of different types of mastoid bandage. The primary purpose of all such dressings is to prevent postoperative wound haematomas or seromas. Either complication may cause the patient pain, necessitate drainage, or increase the risk of postoperative wound infection.

AIMS & OBJECTIVES: The purpose of this study was to assess whether compressive head bandages are necessary

after ear surgery to prevent complications such as haematoma or wound infection.

METHODS: A hospital based study of 50 patients (30 males & 20 females) who underwent tympano-mastoidectomies, were selectively applied different types of mastoid bandages, which include conventional mastoid pressure bandage consisting of gauge - cotton - gauge layer placed over the pinna above which the pressure bandage with ribbon gauge of cotton fabric is applied. The other types include mastoid bandage with Dynaplast, Micropore.

The pressure dressings were changed at 24 hours and discontinued at 3 to 5 days. Patients were then evaluated at their first postoperative appointment 1 to 3 weeks after surgery.

RESULTS:

	Male (No. of cases)			Female (No. of cases)		
	Right	Left	Complications	Right	Left	Complications
Conventional mastoid bandage	5	5	3	3	2	1

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Dynaplast bandage	5	5	1	5	5	1
Micropore	5	5	1	2	3	1
Table 1						

Conventional Mastoid Bandage	Male		Female	
	Right (5 cases)	Left (5 cases)	Right (3 cases)	Left (2 cases)
Complication A	-	-	-	-
Complication B	1 (facial puffiness)	-	1 (bruising)	-
Complication C	1	1	-	-
Table 2				

Complication A = Haematoma.

Complication B = Facial puffiness/ bruising.

Complication C = Pain during removal.

Dynaplast Bandage	Male		Female	
	Right (5 cases)	Left (5 cases)	Right (5 cases)	Left (5 cases)
Complication A	-	-	-	-
Complication B	-	-	-	-
Complication C	1	-	-	1
Table 3				

Complication A = Haematoma.

Complication B = Facial puffiness/ bruising.

Complication C = Pain during removal.

Micropore	Male		Female	
	Right (5 cases)	Left (5 cases)	Right (2 cases)	Left (3 cases)
Complication A	-	-	-	-
Complication B	-	-	-	-
Complication C	-	1	1	-
Table 4				

Complication A = Haematoma.

Complication B = Facial puffiness/ bruising.

Complication C = Pain during removal.

Out of 50 cases, in which 15 cases were applied conventional mastoid bandage resulted in 4 complications (26.66%). Whereas out of 20 cases of Dynaplast bandage, only 2 showed minor complications (10%) with only pain during removal of this bandage.

Out of 15 cases where Micropore was used as bandage, only 2 showed up with minor complications (13.33%), with only pain during removal of Micropore.

DISCUSSION: From the above study, we learned that conventional mastoid bandage imposes great discomfort to the patient following otological surgeries resulting in various unwanted complications from such pressure bandage.

This also leads to some degree of dissatisfaction among few patients. The Dynaplast bandage proved to be among the best with minimal or no complications (only complaints of pain during removal due to the adhesive nature of this bandage). The post-operative outcome (e.g.: - graft uptake, no post-operative wound infection) is also similar to that of conventional mastoid bandage & Micropore. The post-operative outcome with the Micropore is also similar to that of Dynaplast bandage, but the problem lies with the detachment of the Micropore from the skin due to less adhesive effect than that of Dynaplast.

Rowe-Jones et al. conducted a prospective trial in patients undergoing tympanoplasty, tympanomastoid, or middle ear surgery via the endaural or postauricular approach.^[1] Following wound closure, 50 patients were randomized to each study arm to either receive a pressure dressing or not. There was no difference in the rate of haematoma in the dressing versus no dressing group (2.0% each). There was no statistically significant difference in the rate of minor wound complications, such as in infection, dehiscence, or haematoma, in the dressing versus no dressing group (18% vs. 8%, respectively).

Castelli et al.^[2] also performed a prospective, randomized study in 420 cases of postauricular tympanoplasties or tympano-mastoidectomies. There were 212 cases included in the pressure dressing group and 208 cases in the no-pressure dressing group. There were three cases of pinna bruising in the pressure dressing group and no cases in the no-pressure dressing group ($P < .05$). There were 70 cases of minor skin erythema pressure dressing group and no similar erythema in the no-pressure group ($P < .05$). There were no haematomas or wound infections in either group.

Lou et al.^[3] evaluating the efficacy of mastoid pressure dressings in 92 paediatric cochlear implant patients. There were 44 patients who had a mastoid dressing placed and 48 patients who were not treated with a mastoid dressing. Subgroup analysis was performed for each type of incision in both the pressure dressing and no-pressure dressing groups. There was no statistically significant difference in haematoma formation or other wound complications between the two groups. Only the mastoid pressure dressing with the inverted J incision group had a higher complication rate.

Sheng-Dean Luo^[3] et al. in their study, also found that there is no clinically significant advantage of mastoid pressure bandage over others. This similar type of study is also supported by Richard K. Gurgel et al.^[4]

CONCLUSION: Current available evidence shows there is no advantage of conventional mastoid bandage use after middle ear surgery. Such bandages may not be required after routine, uncomplicated middle ear surgery. This can

undoubtedly be replaced by Dynaplast bandage which satisfactory post-operative outcome.

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Fig. 1: Dynaplast bandage



Fig. 2: Good healing without complication



Fig. 3: Facial puffiness along with bruising at forehead (shown by arrow) following conventional mastoid bandage

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