

## Main Articles

# How long should ears be bandaged after otoplasty?

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### Abstract

A firm head dressing is usually applied after otoplasty. Some surgeons recommend that the patient should wear the bandage for up to 10 days after surgery. However, these bandages are frequently displaced or come off. Patients complain of reduced hearing, itch and the smell of old blood in the bandages. A case series of 52 patients undergoing bilateral otoplasty who had a head bandage on for only 24 hours was audited prospectively. Minor complications occurred in two patients. A head bandage does not need to remain on for more than 24 hours after otoplasty.

**Key words:** Surgery, plastic; Ear, external – abnormalities; Ear, external – surgery; Post-operative complications

### Introduction

Recommendations for head dressings following otoplasty vary. While some surgeons recommend a firm pressure dressing for only 24 hours (Adamson *et al.*, 1991), others recommend it be worn for up to 10 days (Bull, 1994; Beasley and Jones, 1996). However, these bandages frequently come off or are displaced (Bradbury *et al.*, 1992). Patients also complain of reduced hearing, itch and the smell of old blood in the bandages.

Early in the author's otoplasty experience a number of bandages were displaced overnight. The patients were then advised to wear an elastic headband at night for the next six weeks and no adverse outcomes were observed. A policy of bandaging the ears for only 24 hours after otoplasty surgery was therefore adopted. A prospective audit of complications following the introduction of this policy is reported.

### Materials and methods

All patients having bilateral otoplasty performed by the author (Table I) were entered in a data base and complications recorded prospectively. All patients were seen at one week. Two patients failed to attend four months follow-up. These patients were contacted by telephone. A number of patients have been followed for longer periods of time.

The surgical techniques used have been modified to suit the particular ear. The author uses a variety of techniques. If an antihelical fold was necessary the

anterior surface was scored until it felt soft and malleable (Stenstrom, 1963). 4.0 vicryl horizontal mattress 'adjusting' sutures were then placed laterally from periochondrium to perichondrium posteriorly thus creating the antihelical fold (Nolst Trenite, 1994). In the last 10 cases an 'external' Mustarde suture has been used to create the antihelical fold (Connolly and Bartley, in press). If the conchal bowl is prominent the concha is shaved in order to reduce the prominence of the conchal bowl (Webster, 1977; Wright, 1978). No drains or prophylactic antibiotics have been used. In the group as a whole both ears tended to be affected in a similar manner, although to varying degrees. The strength of the conchal cartilage also varied from individual to individual but was generally found to increase with age.

### Results

Between January 1993 and August 1997, 52 patients had bilateral otoplasties for congenitally prominent ears. Two patients developed complications in the early post-operative period. One patient haemorrhaged 36 hours following surgery which necessitated the placement of a head pressure dressing for a further 48 hours. One patient was playing and fell off a tree pulling stitches from the superior pole of one ear. This had to be resutured under general anaesthesia.

Fifty patients were followed up for a minimum of four months. All patients were examined for adequacy of cartilage medialization, haematoma, chondritis and loss of postauricular sulcus. None of the patients had any of these complications in the short-term. The two patients who failed to attend at four months both had satisfactory outcomes at one

TABLE I

AGE AND SEX DISTRIBUTION OF PATIENTS UNDERGOING OTOPLASTY

	5–15	16–30	>30
Age			
Male	13	14	2
Female	5	13	5

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week. Three patients were dissatisfied with the results of surgery and underwent corrective surgery during long-term follow-up. In two cases this was due to unfurling of the upper pole and in one case this was because the lobes had not been dealt with adequately at the initial surgery. Two patients developed keloid some 18 months after the surgery. These were unusual in that both were male patients with fair type II skin.

### Discussion

The immediate complication rate if pressure dressing is used for only 24 hours and then followed by a head band for six weeks was low but complications did occur. One child was playing on a tree unwatched by his parents and came into the house with a bleeding right ear. Examination showed disruption of the sutures superiorly. This had to be resutured under general anaesthesia. Another child developed further bleeding 10 hours after removal of the bandage. A further firm head dressing was applied for 48 hours and no further problems were experienced.

Immediate complications following otoplasty are rarely reported. Adamson *et al.* (1991) reported bleeding in one patient who had the dressing in place but who required redressing. Another study prospectively looking at the effectiveness of surgery in relieving the psychosocial distress of children with prominent ears reported problems with bandage displacement. Two thirds of the children had their ears rebanded, on average 2.5 times. These tended to be the younger children who were intolerant of itching. Parents rebanded the ears themselves, or asked a local nurse to do so. The problem was not reported back and did not appear in the case notes. Forty per cent of children also complain of itch (Bradbury *et al.*, 1992).

Ears are banded post-operatively for three main reasons: splinting, protection and prevention of haematoma. It could be argued that 24 hours of bandaging achieves these goals if a head band is used when the patient uses an elastic head band at night for protection. Despite meticulous haemostasis some degree of ooze occurs after surgery. However, one would expect that if a haematoma was going to occur after surgery it would occur in the first few hours after surgery as the vasoconstrictive agents are wearing off. While a firm bandage may prevent a haematoma or seroma in the early post-operative period it is probably not necessary for seven to 10 days.

The bandage also protects the ear in the early post-operative period, but does the patient need a firm head dressing for a week to achieve this? A simple head band might be just as effective. The bandage also splints the ears during the early post-operative period, however, in many cases it would appear to migrate placing unexpected tensions on the ear. If, in addition, the bandage does come off as frequently as is reported (Bradbury *et al.*, 1992), this questions its value. Wound strength is still minimal after a week

and healing takes at least six weeks before the scarring has matured. If the bandage does act as a splint then it should be kept on for up to six weeks.

Evaluation of the final result following otoplasty is difficult and standardized objective evaluation of the post-operative result is difficult. Late complications did occur, however, on all occasions the result was satisfactory at one week. This suggests that long-term complications were not related to the early removal of the head bandage.

The theoretical advantages of head bandaging have to be weighed up with the practical disadvantages. The problems these bandages cause patients are frequently not discussed nor are they reported to the surgeon (Bradbury *et al.*, 1992). The bandages come off or are displaced, young children are intolerant of itching and patients may also complain about the smell of coagulated blood in the hair and the conductive deafness caused by the bandages. Many patients are unable to return to work or school with a head bandage while they can do so almost immediately when the bandage is removed.

Bandaging of the ears following otoplasty for seven to 10 days is a procedure that has been adopted without critical review. Young males do have a tendency to indulge in vigorous activity and it could be argued that protection is necessary while they are playing. In general, however, there is little need to bandage the head for more than 24 hours after otoplasty.

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