

Ear splintage

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Introduction

Each year a number of children are born with abnormally shaped ears. Where the ear has an adequate amount of cartilage, but has developed with an unusual fold or kink, or the ear is abnormally prominent, it should be possible to reshape it. This is usually achieved by conventional surgery after the age of five years, when the ear cartilage is firm enough to allow reshaping by scoring or suturing. Surgery at an earlier age, when the cartilage is less substantial and more pliable, can result in unwanted buckling of the helical rim. This property of pliability in infant ear cartilage can be used to advantage in reshaping the ear with simple splints.

Reshaping the readily mouldable ear cartilage is easily achieved. A splint fixed into the scaphal hollow, lying just within the helical rim, in an infant can unfold a Stahl's bar, push up a lop ear, or emphasize an antihelical fold in a prominent ear. Splinting is a simple procedure carried out by parents after instruction. Splints which are pliable and lightweight are easily tolerated. If reshaping in infancy is successful and permanent, then future surgery can be avoided. The following review examines whether or not the correction is long-lasting.

The technique of splintage

Each splint comprises a flexible wire core cast in a thick protective silastic surround. It should be fitted as soon as possible after birth. The period of splintage required is shorter (one to two

weeks) when the splint is applied within the first few days of life, and longer (three months) when the splint is first applied at three months of age. The splint is fitted onto the ear in the furrow just inside its rim, where it is secured with 5-mm wide adhesive tape. The splint extends upwards from the upper portion of the conchal hollow to lie just posterior to the helical fold. In this position, it is able to push out the bulge of a Stahl's bar, and to create, where necessary, an antihelical fold. The splinted ear is then taped to the side of the head with broad 1-2-cm adhesive tape. The tape sticks best early on in life as the sweat glands are immature. The younger the child, the less they are likely to reach up and dislodge the splint.

Results

In this review, 50 patients with a variety of conditions were treated with splints before six months of age. The follow-up time after cessation of splintage ranged between six months and six years. Thirty-four had prominent ears, seven had a Stahl's bar, four had kinks in the rim of the ear, three had cup ears, and two had lop ears. The results, graded as excellent if the condition was corrected, good if there was some improvement, and poor if there was no change, are shown in Table 1.

In all, 23 (46%) of the patients were cured of their deformity, and 14 (28%) were helped. Thirteen patients (26%) derived no benefit from the procedure.

Table 1. Results of splintage

	<i>Excellent</i>	<i>Good</i>	<i>Poor</i>
Stahl's bar	7	0	0
Rim kink	2	1	1
Bat ears	14	10	10
Lop ear	0	2	0
Cup ear	0	1	2

Discussion

The split proved effective in correcting Stahl's bar and helped with rim kinks and prominent ears. Even in cup ears, in which, in addition to the forward folding of the ear there is a deficiency of rim cartilage, some improvement was gained in one case. In all ear conditions, those referred later tended to be more refractory to treatment.

Conclusions

The splintage technique is not a panacea for all ear deformities. It works only when the whole ear has developed, but is abnormally folded; it

has no role in treating microtia. It is thought that persistent circulating maternal estrogen maintains the malleability of the ear cartilage for a limited time after birth^{1,2}, and treatment early in this remouldable period is recommended.

Ear splintage can correct an ear anomaly without resort to surgery, thereby avoiding an anesthetic and the teasing that may result from an uncorrected deformity. Despite a number of reports showing neonatal splintage of misshapen ears to be of benefit, the technique is not yet widely employed^{3,4}.

References

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