



CASE REPORT

# Correction of congenital 'triple lobe type' auricular cleft

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## KEYWORDS

Cleft earlobe;  
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**Summary** Congenital cleft earlobe is a rare auricular malformation. Various techniques have been reported for the correction of this deformity. Few papers deal with surgical techniques to correct the triple lobe sub-type cleft. This anomaly presents more technical difficulties in the three-dimensional rearrangement than other sub-types. We describe the technique used to correct a triple lobe deformity in a 5-year-old boy. The postoperative result was satisfactory at one year follow-up.

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## Case report

A 5-year-old boy presented with prominent ears and a congenital cleft ear lobe of his left ear. He was self-conscious of the external aspect of his ears. Both ears were prominent; the left ear had a complex cleft of the earlobe. This was divided into three components, each on a different plane (Fig. 1): an anterior component (a); a medial component, which was located between the other two on an anterior-posterior axis (b); a posterior component (c). This deformity was classified as a triple-lobe sub-type according to Kitayama.<sup>1</sup>

There was only a modest tissue deficiency compared to the unaffected side; therefore, it was decided to correct the anomaly without any kind of additional tissue. Preoperative pictures

were taken and an accurate plan was made. Surgery was performed under general anaesthesia.

The medial (b) and the posterior (c) component of the cleft were approached with a full-thickness incision parallel to the cleft margin obtaining two rectangular flaps (Figs. 2 and 3). The two flaps, rotated downwards, were joined together; a Z plasty was then performed lateral to the base of the anterior component (a) to bring it on the same plan of the posterior component (c) and to close the cleft between them (Fig. 4); the tissue defect between b and c was filled with a flap obtained by deepithelisation of the posterior aspect of the anterior component (the tag lobe): this flap was transferred in place and the anterior skin was customised to the gap (Fig. 3). Skin was sutured with 6/0 Vicryl.

One year later, the patient was submitted to a standard anterior scoring (Chong-Chet) bilateral prominent ear surgical correction, under general anaesthesia. The cosmetic result, 1 year after the second operation, was satisfactory (Fig. 4).

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Figure 1 Triple lobe cleft in a 5-year-old boy.

## Discussion

Cleft ear lobe is a rare congenital anomaly, especially in Europe and the Western world. Cleft earlobes have been classified by Yamada<sup>5</sup> into anterior, posterior and double-lobe types. Matsu-moto<sup>6</sup> divided ear-lobe clefts into two categories: simple clefts and hypoplastic clefts with significant soft tissue deficiency. Kitayama<sup>1</sup> described four subtypes as longitudinal, transverse, triple lobe and defective types.

Many papers deal with different techniques to correct the various types of the deformity;<sup>2-4,6-8</sup> few of them have addressed the triple-lobe deformity.<sup>9,10</sup>

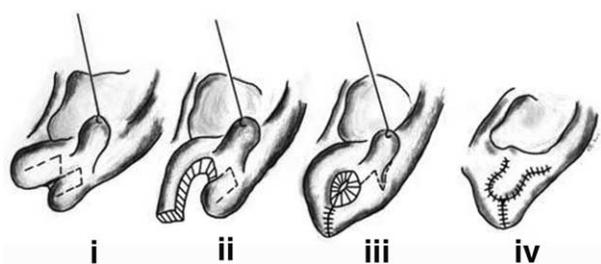


Figure 2 Surgical steps.



Figure 3 Intraoperative aspect of the transferred tag lobe before deepithelisation.

The first aim of the surgical repair is to restore the smooth, natural profile of the free margin of the earlobe. Where possible, surgery should be performed with minimal tissue sacrifice to maintain an adequate lobule volume and avoid introduction of additional soft tissue by mean of local flaps or free grafts.

The main problem in a triple lobe deformity is that the three components rest in different planes. Park<sup>9</sup> considered the triple lobe subtype as a tag and cleft type; he stated that the tag should be relocated and fill the volume defect at the cleft site. With his technique the surgeon had to choose where was the cleft and which was the tag.

Park's idea of the bipediced skin flap and the button down procedure<sup>9</sup> interested us in the planning. In his method, to avoid any incision along the free margin of the ear lobe, at least two of the three lobes needed to lie on the same plan, which should be the main axis of the lobule. In fact if the misalignment is obvious it is difficult to obtain



**Figure 4** Final result 1-year after prominent ears correction.

a smooth and naturally curved contour with no residual cleft.

In our case we had to unfold two lobes to gain tissue for the free margin, in a very similar way to that described by Attalla<sup>2</sup> for the medial half of the cleft and Bhandari<sup>3</sup> for the lateral half of the cleft, and then use the 'tag' third lobe as an island flap;

this was deepithelised and customised to fit in the cleft.

In conclusion, to obtain a satisfactory reconstruction of the triple lobe subtype deformity, we advocate a careful planning that considers the position of the three components of the lobe on different planes and the need to realign them.

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