

Correction of Head Contour

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Summary

A method for solving the problem of a patient who was dissatisfied with the shape of the back of his head. Justification for the operation and operation method discussed. In order to plan the operation a plaster cast of the patient's head was used, and for correction of the deformity an implant was constructed of hard silicone. The implant was inserted by means of an incision on the highest point of the back of the head, and fixed to the periosteum. Postoperative course was normal and one year after the operation the patient was satisfied with the result of the operation.

Key words: *aesthetic surgery, correction to the back of the head, implant*

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CASE REPORT

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Introduction

With the raised standards and education of the population there has been an increase in the desire for corrective and aesthetic operations. Medicine, which for years had the role of saving lives, is increasingly assuming the role of improving its quality. The concept of plastic surgery of the head and neck is in fact understood to mean facial correction. Although such operations are definitely the most frequent, it is possible today to intervene on any part of the head. This paper describes the case of a patient who was dissatisfied with the shape of the back of his head, and the dilemmas and problems associated with the solution.

Case presentation

A patient came to the Clinic for Maxillofacial Surgery Clinical Hospital "Dubrava", aged

19 years, extremely tall, a graduate from the School of Applied arts. Before coming to our Clinic he had visited several plastic surgeons and his request for a correction had been refused. The patient was accompanied by his mother.

During a talk the patient said he was aware that his request was unusual but he felt so dissatisfied with the shape of the back of his head that he was prepared for the operation. He had previously always masked the defect by his hairstyle, leaving the hair on the back of his head 10 to 15 cm long, and the remaining hair cut 1 to 2 cm (Fig. 1). The reason why he had decided to have the operation was that he had been called to do military service, where was probably impossible to keep the same hairstyle. Apart from the flatness at the back of his head no other changes were found during an examination.

After the examination the following questions were asked: does the patient need an operation; how to plan the desired head shape; which material to

use, and finally how to operate? The decisive question was whether to operate? The reason why we accepted this patient was because he had presented his problem very concisely; he was aware of the unusual character of the operation and did not insist on the operation if the possible complications were greater than the possible gain. We were even more convinced when we drew a comparison with rhinoplasty, which is of a routine order even for patients with minimal deformations of the nose.

From the very beginning we knew for we would have to use an implant for the correction. However, we were not sure of how to arrive at the correct shape of the head for the patient preoperatively, and what implant shape would satisfy the patient. The only way to obtain a correct model for the patient's head was to make a cast. Thus we obtained a plaster model of the whole head and a model of the back of the head (Figs. 2a, 2b).

The ideal material for making the implant needed to be easy to mould and at the same time to have the hardness of bone. Initially our aim was to use a dual-component silicone so that the implant could be obtained by casting. However, on reading the manufacturers' specifications we realised that no dual-component silicone is intended for implantation. Consequently we decided to make the implant from a hard silicone block, whose characteristics enables implantation into the body.

The modelling of the implant was carried out with the help of the patient (Figs. 3a, 3b). In this way we were able to construct a model in accordance with the patient's wishes. His knowledge and experience in modelling also helped during the construction.

The operation was performed under general anaesthetic. We made the operative incision on the highest point at the back of the head. The implant was placed into a pocket which was slightly larger than the implant itself and secured to the periosteum. Suction drainage was applied. The postoperative course was normal. Drainage was removed on the fourth postoperative day and the sutures on the seventh. After the operation the patient was satisfied with the new shape of the back of his head. During the last check-up, one year after the operation, the finding was normal (Fig. 4a, 4b).

Discussion

The selection of patients for corrective, aesthetic operations is the introductory chapter in all textbooks on aesthetic surgery (1). The advice given there definitely helps when excluding patients in whom the basic, most frequently psychiatric, disease is contraindication for the operation. There remain a large number of patients who wish to change their life by changing their appearance. Here the textbooks can do little to help and the surgeon must rely on his own experience. Consultation with a psychotherapist can be of help, although the surgeon always makes the final decision. In the present case we arrived at a decision on the basis of a talk with the patient, objective finding of the deformity, the possibility of correcting the deformity and by comparing the risk of the operation and possible gain.

The exact form of the deformity was decisive for the success of the operation. It would have been easiest to achieve by means of a stereolithograph on the basis of a three-dimensional CT. However, these models are not produced in Croatia, and their cost, independent of the material, ranges from 5 to 10 thousand DEM, which was unacceptable for us. Consequently, we were forced to utilise our own experience and to construct an epithesis of the face, and for construction of the implant we used a plaster cast of the patient's head (2).

It was necessary for the implant to be harmless, have a shape which satisfied the patient and suited the shape of the head, and be easy to model. An ideal implant shape could have been achieved by casting in a mould. However we were unable to find a liquid two-component silicone which was possible to implant. An alternative was Palakos, a material which is frequently used by neurosurgeons for reconstruction of the calvaria, but we decided against this because of its hardness. Namely, due to the possibility of its sharp edges causing necrosis of the skin. Hard silicone, which we decided to use, is used for constructing implants on the chin and zygomatic bones. It is easy to model, is not harmful, and its edges are flexible. We thus avoided the possibility of decubitus.

The operative incision for placing the implant needed to be as least visible as possible. We, therefore, made the incision on the top of the back of the

head, and as the patient is exceptionally tall, it is practically invisible. The lesion was closed without tension, although there was a possibility that after placing the implant the tension on the skin at the back of the head would be too great, preventing the

lesion from closing. The patient was informed of this possibility and we therefore envisaged the possibility of initially placing a "tissue expander" and later, after expansion of the skin, placing the implant.