

Comments on Huizing's paper on implantation and transplantation in reconstructive nasal surgery

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I would like to give some comments on the article on implantation and transplantation in reconstructive nasal surgery by Huizing published in the December 1974-issue of this journal. (Rhinology, 12, 93-106, 1974).

1. *Ad septal reconstruction ("plate type")*.

In his contribution Huizing discusses the technique of what he names the "plate-type reconstruction" of large septal defects. I agree with him that implantation of cartilage sutured to the mucosal flaps has proven to be an unsatisfying technique of septal reconstruction in cases where a subtotal removal of the septum cartilage is necessary. There is an appreciable percentage of poor results with this technique due to resorption of the cartilage, curling or malposition of the implants often in several months.

For this reason Huizing and others including myself use autogenous bone to reconstruct the septal defect. For this purpose he uses ethmoid bone. This is frequently lacking however.

In those cases where there is no ethmoid bone of consequence one should consider using autogenous cortical bone as a substitute. There are two good sources, the lateral wall of the ileum and the mastoid bone.

The mastoid cortex is preferable and more substantial. Ear surgery is familiar to most of us and at the appropriate time one needs only to rotate the head to the donor site. The technique has been given in a recent contribution to this journal. (Drumheller G. H.: Septal reconstruction in the deficient nose Rhinology, 14, 189-192, 1976). Cancellous bone cores for augmentation may be removed from the iliac crest with Westerman biopsy needles as described by Klaff.

The posterior septal space should be implanted with thin cortical bone, crushed cancellous bone, or crushed autogenous cartilage if available. Bank bone, cartilage, or sclera are second choices.

In cases with very large septal perforations of 3 or 4 cms. in diameter it frequently is impossible to recreate the valves (area 2) surgically. One can usually find and establish bilateral mucosal flaps in the posterior 18 to 20 mm. Implantation of mastoid cortical bone on one or both sides of the thin ethmoid remnant will create sufficient narrowing in this area to improve the nasal pressures during nasal respiration. Crusting may be reduced or eliminated in some patients.

2. *Ad implantation into the columella.*

In this paragraph a. o. the technique of implanting a strip of cartilage between the two medial crura for columella reconstruction is discussed.

I would like to add that Abe Silver has utilized septal cartilage effectively for this purpose and carves a bilateral wing to recreate and reenforce the tip with increased projection and lengthening of the columella (personal communication). The implant should be adjacent to the medial crura but not between them. The reconstruction of the caudal septum and columella are further augmented into more normal anatomical relationship by freeing the terminal ends of the medial crura as taught by Hinderer. Advancing sutures to the I-C incisions further a good mobility of the valve and aids in removing the dip before the tip.

3. *Ad submucous implantation in the nasal cavity.*

- a. After the experience of others (Azuara, Carillo, Hinderer and West) including myself it has not been possible to successfully implant the middle turbinates with bone or cartilage of significant quantity and have it remain in situ.
- b. As to the technical details of the implantation operation as given on p. 104 of Huizing's article one can add that it is important to narrow the nasal airway to physiological and anatomical limits where indicated and where possible. It is most desirable to reconstruct the valve area, and implantation of autogenous bone into membrane septi is of great value in these cases.

The surgeon therefore is limited by the available tissues and the relationships of the lateral walls of the nose to the septum not only antero-posteriorly but also infero-superiorly.

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