

Rhinoplasty: Spare roof technique - A new approach to the dorsum

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Since 2014 we have been developing the Spare Roof Technique - SRT. According to many authors, in rhinoplasty, the most difficult segment of control is the dorsum. Most revisions are due to iatrogenic manoeuvres on the dorsum and unpredictability in its healing / special reorganization in the so-called K area. The transition from the upper 1/3 to the middle 1/3 is clearly a critical area in the stability of the nasal pyramid - area of bone-cartilaginous transition. In this region, the superior alveolar cartilage extends cephalically up to 10 mm underneath the bones of the nose. In the Caucasian nose the most relevant dysmorphic feature is the Hump, in both genders. The treatment of this dysmorphism has been reported since the times of ancient Egypt. In the 1980s and 1990s more advanced techniques were popularized and much research work was done. Today there are clearly two types of techniques from the conceptual point of view - the "surface" and those that work the most basal part of the nasal pyramid - the "structurants". The techniques most practiced and taught in the western world are clearly the surface ones: "Humpectomy en bloc" - HEB and "Split Hump Technique" - SHT are the techniques that dominate this group and are most used in all reduction rhinoplasty. In HEB the block is removed, i.e. the whole osteo-cartilaginous set is removed en bloc - thereby destroying the K area and the Upper Lateral Cartilage - ULCs. In this technique it is mandatory to reconstruct this area, mainly with spacer grafts - Spreader Grafts.

In SHT the ULCs are only separated in the midline, and they are used to confine the Spreader Flaps - this is a less aggressive technique for the stability of the middle 1/3. SHT is clearly the most commonly used technique today. Minor variations of this

technique have been described which, while important, do not fully meet the needs felt on a day-to-day basis.

The persistent difficulty in achieving harmonious and soft dorsum has led to the development of numerous camouflage techniques - namely for intermediate and fine skins. From the temporal fascia to cartilage powder (ex-diced), passing through the interposition of fat, muscle or other materials. These techniques are not always fully effective and the long-term results remain clearly unsatisfactory in the subgroup candidate for revision surgery. In this context, the idea arises of preserving important structures like the ULCs and the Spare Roof Technique - SRT is developed. Conceptually this technique has the following 4 steps:

1. Separation of the upper part of the quadrangular septum from the ULCs
2. Exérisis of the excess cartilage along the upper edge of the septum
3. Ostectomy of the caudal portion the Nasal Bones - NB - preserving the ULCs immediately by low-step performed with ultrasonic surgery or diamond drill.
4. Suture of the ULCs to the remaining quadrangular septum in order to avoid the spring/convex effect of the ULCs.

In this way, we achieve a uniformly smooth and structurally stable dorsum (demonstrated by our outcomes and by engineering calculations). From the structural point of view there is an alteration of the area K which is moved cephalically between 3 and 10 mm.

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