Free Diced Cartilage: Tips and Tricks of a Customized Procedure in Rhinoplasty

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Summary: Free diced cartilage graft represents a relatively innovative technique with multiple applications. It is conventionally used for smoothening, augmentation, or camouflaging of the nasal dorsum in primary or revision rhinoplasties. The aim of the article was to give some tips and tricks about harvesting and preparation of free diced cartilage to maximize its exploitation and make it easily repeatable, extending the field of application not only to the nasal dorsum but also other sites, such as the tip of the nose.

Free diced cartilage (FDC), harvested from septum, auricular concha/tragus, or ribs is certainly a useful and effective method to camouflage, smoothen, or augment the nasal dorsum. In fact, a fine-particle cartilage paste (particle diameter less than 0.2 mm) is realized and directly put into the desired location with a Freer elevator or, more commonly, a previously holed 1-ml syringe.1,2 The syringe is drilled first to allow any excess fluid to be squeezed out and inject “pure” FDC through an unilateral gap infracartilaginous incision. The FDC is finally molded into the desired shape and fixed with drapes. FDC mainly found applicability in the nasal dorsum for fine adjustments.

In our opinion, FDC is a very effective tool that may find many applications in everyday nose surgeries. To better address FDC use and preparation, we tried to provide a series of tricks and tips allowing to maximize its benefits and facilitate its use. In fact, some points need to be raised (see video, Supplemental Digital Content 1, where tips and tricks about harvesting and processing are given).

In our opinion, FDC injection with stronger syringes is conventionally used for smoothening, augmentation, or camouflaging of the nasal dorsum in primary or revision rhinoplasties. To better address FDC use and preparation, we tried to provide a series of tricks and tips allowing to maximize its benefits and facilitate its use. In fact, some points need to be raised (see video, Supplemental Digital Content 1, where tips and tricks about harvesting and processing are given).

Operative Technique

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The authors\textsuperscript{1,2} suggested the insertion through the infracartilaginous incision before skin closure in the open approach. However, we would like to emphasize the extreme versatility of this method, which is also applicable in case of closed approach, by placing the FDC on site through the intercartilaginous incision. This is remarkable, especially for those surgeons still performing the closed approach, even though nowadays the open one is preferred in most cases.

Furthermore, the same authors\textsuperscript{1,2} focused on the dorsal placement of the cartilage paste. Anyway, we also found applicability of FDC for a better definition of tip projection, fullness, and blunt profile. Although differences exist and persist according to patient’s ethnicity, sex, and age, it is always advisable not to obtain nasal tip sharp contours after surgeries. FDC also helps to reach a very natural-looking appearance in the tip by shaping minimal irregularities soon after final closure. Of course, nasal drape must be accurate to keep the FDC on site.

In accordance with Erol,\textsuperscript{3} FDC is not always the best indication: in case of open roof, for example, wrapped diced cartilage may be preferable. In fact, as we previously mentioned, FDC should be considered as an ideal tool for refinements and with mild filling properties. Large areas to be filled usually benefit from other solutions. However, differently from his point of view, by using the aforementioned tips and tricks in cartilage harvesting and preparation, there is no need for stronger syringes and no particular force is required for injection, even in small areas.

Finally, according to us, FDC may also find applicability in cases where septum perforation needs a filling treatment.

In conclusion, although further studies are needed, in the future FDC may represent an ideal filler to use not only during major nose surgery but also minor ones and refinements, as happens nowadays with rhinofillers.

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