

ROLE OF FAT GRAFTING IN PRIMARY RHINOPLASTY

INTRODUCTION:

Fat grafting is becoming an essential tool for revision rhinoplasty. This paper presents the utilization of fat for nasal volume restorations and contour adjustments, solely or in combination for primary rhinoplasty.

MATERIALS AND METHODS:

Autologous fat grafting was utilized in 59 PRIMARY rhinoplasty cases. IN 12 cases "external nasal fat grafting" (without dissection) was the only component of the rhinoplasty, while in 47 cases it was part of the rhinoplasty in addition to cartilage grafting and other steps. The fat grafting was repeated in 1 – 3 times, differentially.

Anatomic distribution of nasal fat grafting areas are listed as:

Tip (n=10), columellar base (n=18), proximal nasal bridge (n=16), 1/3 middorsum (n=24), nasion (n=39), anterior columellar column (13) and glabellar/forehead projection (n=41) (figure 1)

PART A: Standardized preoperative and 8 weeks postinjection (last injection) lateral views of fat-only cases (n=12) were utilized (figure 2). Color and surface extraction method (image pro 3) was used to quantify the projection differences.

PART B: Complications were evaluated in 59 cases

PART C: 10 independent subjects interpreted the preoperative and postoperative views of 59 cases in terms of improvement.

Scaling for evaluation:

Grade 1: negative progression

Grade 2: no significant chang

Grade 3: minimal improvement

Grade 4: significant improvement

RESULTS:

PART A: Fraction of the overall lateral projection increase to the planned increase was 0.88 (statistically insignificant from 1 (hypothetic increase)).

PART B: Complications

Tip Excess: 3 (due to vertical shift)

Supratip fullness: 4 (due to vertical shift)

Inadequate height: 3 (required additional grafting)

PART C: Grade 1: 1.2 of 59 cases

Grade 2: 3.9 of 59 cases

Grade 3: 18.4 of 59 cases

Grade 4: 35.5 of 59 cases

DISCUSSION:

Nasal augmentation can be achieved in primary rhinoplasty cases. Volume shift due to the gravity may occur in some cases, use of PRP and extended external stabilizing pressure can be utilized to prevent this.

Fat grafting can play a significant role in primary rhinoplasty cases, and delivers the advantage of minimized dissection, and improved skin quality due to the preadipocyte contribution. It can be utilized solely in limited number of cases.

Differential dissection limitations and sequence of the maneuvers will be discussed.

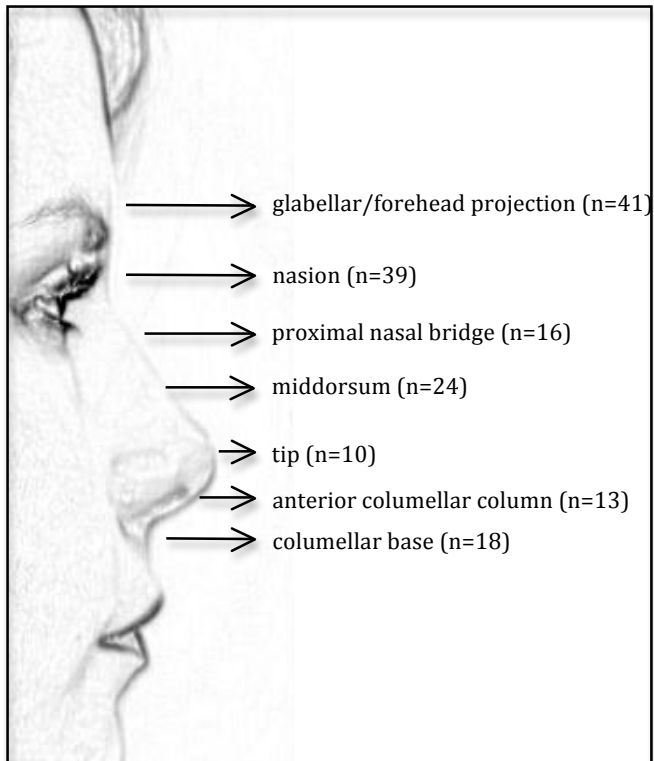


Figure 1: Anatomic distribution of nasal fat grafting areas

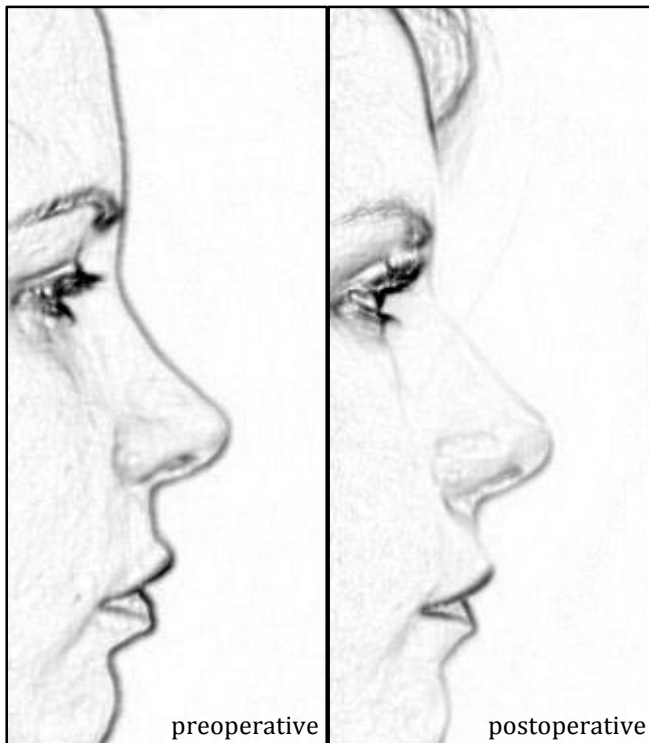


Figure 2: Preoperative and postoperative lateral view of a patient who have undergone fat graft application to nose. Digitized images has been utilized for comparison.