

Craniofacial Practice Patterns In Secondary Cleft Rhinoplasty

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Background

Patients with cleft lip often undergo a primary rhinoplasty at the time of cleft lip repair. Further surgical correction with secondary cleft rhinoplasty (SCR) can sometimes improve both form and function. The timing and technique of SCR remains variable. The purpose of this study is to better elucidate current practice patterns and trends for how SCR is performed in the United States.

Methods

- Survey administered to craniofacial surgeons affiliated with 193 cleft lip and palate care teams approved by the American Cleft Palate Craniofacial Association (ACPA).
- Surveys were sent out to cleft team coordinators to be disseminated to their respective craniofacial surgeons.



Table 1. Age of Procedure & Septoplasty

Item	Intermediate	Definitive	p-value
Age Procedure is First Considered	5.83 ± 2.66	15.86 ± 1.73	
Percentage of Cases where Septoplasty is Performed	10%	98%	<0.001

Table 2. Surgical Approach

Item	Intermediate	Definitive	p-value
Preferred Surgical Approach in Unilateral Repair			
Closed	18	1	<0.001*
Open	34	54	

Table 3. Technique to Address Depressed Alar Rim

Technique	Intermediate	Definitive
Chondromucosal V-Y Advancement	36 (19%)	26 (10%)
Columellar Strut	21 (11%)	43 (17%)
Alar Rim and/or Batten Grafts	26 (13%)	44 (18%)
Tip-Defining Intradomal Sutures	44 (23%)	51 (20%)
Tip Onlay Grafts	23 (12%)	42 (17%)
Intercartilaginous sutures to secure LLC to ULC	35 (18%)	38 (15%)
Other	7 (4%)	8 (3%)

Table 4. How Often is Autologous Cartilage Utilized?

Percentage of Cases Utilizing Autologous Cartilage	Intermediate	Definitive	Chi-Squared Analysis
1-25%	31	5	X ² (2) = 39.07 p < 0.001
26-50%	9	5	
51-75%	3	9	
76-100%	9	36	
Total	52	55	

Table 5. Sources for Augmentation

		Absorbable Plate	Cadaveric Cartilage	Autologous Ear	Autologous Septum	Autologous Rib	p-value
Intermediate	Tip Augmentation	4	12	17	19	2	0.001
	Columellar Support	10	15	7	21	8	0.006
	Dorsal Support	2	14	9	19	9	0.067
Definitive	Tip Augmentation	1	4	14	42	11	<0.001
	Columellar Support	1	8	6	41	14	<0.001
	Dorsal Support	1	5	9	34	24	0.001

Limitations

- Sample size
- Retroactive Assessment of Individual Practice patterns → Recall Bias

Conclusions

The variability in practice patterns of craniofacial surgeons performing secondary cleft rhinoplasty highlights the lack of consensus on when and how these procedures should be performed. Here we highlight major trends among craniofacial surgeons from ACPA-approved teams, but the disparity in consistency stresses the need for further outcomes data for specific timing, techniques, and materials to help inform best practices among surgeons