

Abstract

Objectives: To evaluate patient-reported aesthetic and functional outcomes and complications of a single institution paradigm for reconstruction of non-radical parotidectomy.
Methods: Two-hundred ten patients undergoing superficial or deep lobe nerve sparing (non-radical) parotidectomy were identified between January 2008 and January 2014. Patients were asked to complete an anonymous post-operative survey composed of scales from the FACE-Q questionnaire by phone or mail. The modified FACE-Q survey evaluated cosmetic satisfaction (range: 0-40) and facial symptoms (range: 0-45) with high scores indicating greater satisfaction or more symptoms, respectively. Demographic, clinical, and surgical data including physician reported adverse events were retrospectively reviewed from the medical records of survey respondents. Post-operative aesthetic satisfaction, facial symptoms, and facial dysfunction were analyzed by reconstructive technique utilized.
Results: Ninety-three patients completed the modified FACE-Q survey for a 44% response rate. Fifty-five patients had a rhytidectomy approach (mean age 56.8 years) while 38 underwent a modified Blair incision (mean age 67.1 years). Among rhytidectomy patients, 24 patients were reconstructed with SMAS alone and 31 with abdominal fat or SCM flap. There was no statistically significant difference in FACE-Q aggregate scores for cosmetic satisfaction between rhytidectomy (37.23±4.74) and Blair (36.61±7.13, p=0.608). Similarly, no difference was found in facial symptom scores between rhytidectomy and Blair approaches (18.80±3.63 vs 18.08±4.32, p = 0.774). Among patients undergoing rhytidectomy approach, there was no difference with use of SMAS flap alone (37.00±4.79) and SMAS flap with either fat graft or SCM flap (37.40±4.77, p=0.768). Facial symptoms with use of SMAS flap alone (18.38±3.75) and SMAS flap with either fat graft or SCM flap (19.13±3.57) were also not significantly different (p=0.169). Clinically, greater auricular nerve numbness was the most common sequelae, regardless of approach. Only 2 patients experienced Frey's syndrome and 1 patient with had first bite syndrome. Overall, no statistically significant differences in complication rates, cosmetic satisfaction, or facial symptoms were identified regardless of approach or reconstructive modality.
Conclusion: With appropriate counseling and expectations, high aesthetic satisfaction can be achieved after parotidectomy with a variety of reconstructive modalities, while adverse post-operative symptoms and complications remain low.

Introduction

- Non-radical parotidectomy can be carried out with a combination of facial aesthetic techniques to mitigate the scar, contour deformity and sequelae such as Frey syndrome.
- Standardized patient reported outcomes on parotidectomy approaches have not been incorporated into routine practice for measuring post operative success.¹⁻⁴
- We employed the previously validated FACE-Q patient-reported outcome instrument for facial aesthetic surgeries regarding patient satisfaction and patient-reported adverse events to retrospectively analyze our paradigm for reconstruction of non-radical parotidectomy.⁵
- Our study is the first to incorporate patient-reported outcomes using the FACE-Q survey to evaluate non-radical parotidectomy surgery and reconstruction.

Methods and Materials

After IRB approval, we performed a retrospective chart review for patients undergoing non-radical parotidectomy between January of 2008 and January of 2014. Two-hundred ten patients were identified and were asked via phone or mail to fill out a post-operative survey starting in July 2014. After one month, we followed up our survey with a phone call to those who did not respond in an effort to increase our study yield. Medical records of patients who responded were reviewed for demographic, clinical, and surgical data including extent of surgery (superficial or total parotidectomy), type of reconstruction (SMAS, SMAS with fat graft, SCM flap, SMAS with SCM flap, or none), type of approach (rhytidectomy or modified Blair incision), duration of follow up, pathology, specimen dimensions, smoking status, and post-operative complications (facial nerve injury, wound infection, hematoma, sialocele, keloid, skin flap necrosis, or symptoms of Frey's syndrome).

	Rhytidectomy	Blair	p value
Total Number of Patients	55	38	
Mean Age (yrs)	56.84	67.13	0.001
Gender (M/F)	29/26	25/13	0.149
Superficial parotidectomy [†]	52	32	0.094
Total parotidectomy [†]	3	6	0.168
Benign Parotid Disease [†]	51	29	0.047
SMK active vs. former/non	15	10	0.556
SMK active/former vs. non	28	25	0.113
Mean Follow Up (days)	290	352	
Median Follow Up (days)	118	53	

Table 1. Demographics.

(%)	Rhytidectomy	Blair	p value
Transient CNVII weakness	4 (7.27)	4 (10.53)	0.424
Permanent CNVII weakness	0 (0)	0 (0)	1
Infection	4 (7.27)	0 (0)	0.117
Hematoma/sialocele/seroma	5 (9.09)	2 (5.26)	0.396
Keloid/scar	3 (5.45)	1 (2.63)	0.458
Skin flap necrosis	3 (5.45)	0 (0)	0.202
First Bite Syndrome	0 (0)	1 (2.63)	0.409
Frey's Syndrome	0 (0)	2 (5.26)	0.164
Great Auricular numbness	21 (38.18)	12 (31.58)	0.334

Table 2. Complications

Parameter (total possible score)	Rhytidectomy	Blair	p value
Cosmetic Satisfaction (40)	37.23±4.74	36.61±7.13	0.608
Facial Symptoms (45)	18.80±3.63	18.08±4.32	0.774
Complications (15)	5.31±1.33	5.32±1.65	0.906

Parameter (total possible score)	Men	Women	p value
Cosmetic Satisfaction (40)	37.45±6.39	36.31±4.88	0.092
Facial Symptoms (45)	18.24±4.04	18.87±3.77	0.802
Complications (15)	5.09±1.64	5.61±1.11	0.52

Parameter (total possible score)	Smoker	Nonsmoker	p value
Cosmetic Satisfaction (40)	36.66±4.30	37.09±6.29	0.197
Facial Symptoms (45)	20.12±4.00	17.91±3.75	0.014
Complications (15)	5.48±1.50	5.25±1.45	0.29

Parameter (total possible score)	SMAS flap alone	SMAS with Fat graft or SCM flap	p value
Cosmetic Satisfaction (40)	37.00±4.79	37.40±4.77	0.768
Facial Symptoms (45)	18.38±3.75	19.13±3.57	0.169
Complications (15)	5.29±1.43	5.32±1.28	0.969

Table 3. Comparison of Mean Aggregate Scores between Groups (Higher FACE-Q scores=higher satisfaction)

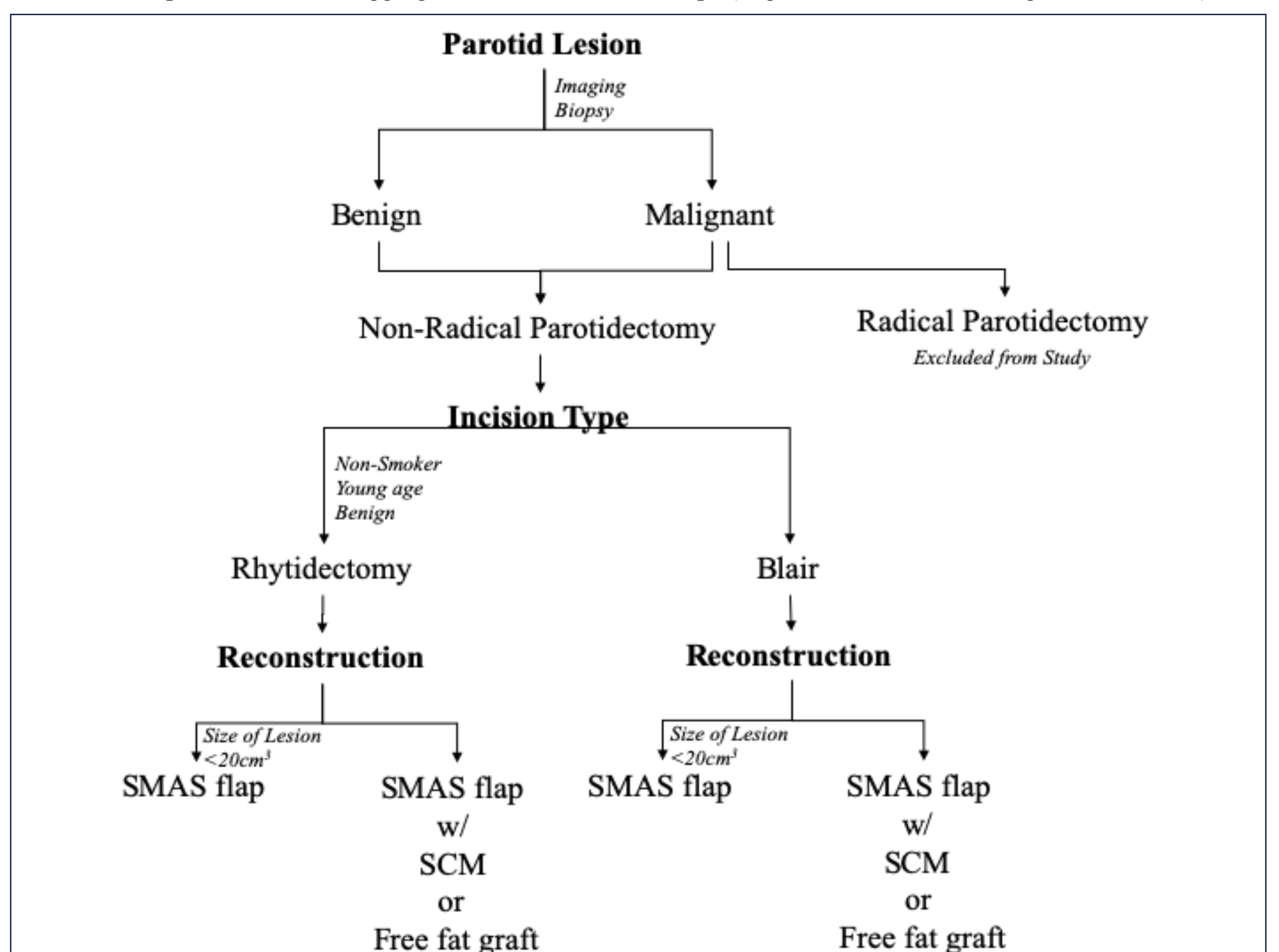


Figure 1. Algorithm for Parotidectomy Reconstruction

Discussion & Conclusion

Patient-reported outcome data is a valuable tool for assessing patient satisfaction and evaluating the various surgical techniques for non-radical parotidectomy surgery with reconstruction. Patient-reported satisfaction after parotidectomy is high, with few cosmetic concerns or functional deficits with appropriate selection of reconstructive technique. Future studies should incorporate surveys such as the FACE-Q as part of normal pre- and post-operative assessment.

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