DOI: https://doi.org/10.53350/pjmhs020231712449

ORIGINAL ARTICLE

Indications and Long-Term Outcomes of Neck Lift Versus Neck Liposuction: A Comparative Study

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ABSTRACT

Background: Neck rejuvenation is a cornerstone of facial aesthetic surgery, addressing issues such as skin laxity, submental fat, and platysmal banding. While neck lift surgery offers structural support and long-term correction, neck liposuction presents a minimally invasive alternative with quicker recovery. There remains limited comparative data on the long-term outcomes and patient satisfaction associated with these two techniques in South Asian populations, particularly in Balochistan and Islamabad.

Materials and Methods: A prospective, comparative study was conducted from March 2022 to March 2023 at Bolan Medical Complex (Quetta) and a private surgical center in Islamabad. A total of 80 patients were enrolled—40 underwent neck lift surgery (Group A) and 40 underwent neck liposuction (Group B). Patient selection was based on clinical indication, anatomical evaluation, and patient preference. Standardized tools including the Visual Analog Scale (VAS), FACE-Q, and WHOQOL-BREF were used to assess satisfaction and quality of life at baseline, 3 months, and 12 months postoperatively. Statistical analysis was performed using SPSS 25.0, with one-way ANOVA and Pearson correlation applied. A p-value <0.05 was considered statistically significant.

Results: Group A demonstrated significantly higher satisfaction scores at 12 months (VAS: 8.7 ± 0.9) compared to Group B (VAS: 7.1 ± 1.2; p<0.001). FACE-Q satisfaction scales also favored the neck lift group. WHOQOL-BREF revealed notable improvements in psychological and social domains in Group A. One-way ANOVA confirmed statistical significance across all metrics, and a moderate positive correlation (r=0.41; p<0.01) was found between aesthetic satisfaction and QoL improvements.

Conclusion: Neck lift surgery yields superior long-term aesthetic outcomes and quality of life improvements compared to neck liposuction. These findings highlight the importance of individualized treatment planning and long-term patient counseling in facial cosmetic surgery.

Keywords: Neck lift, Neck liposuction, Aesthetic surgery, Patient satisfaction, FACE-Q, WHOQOL-BREF, Balochistan, Islamabad.

INTRODUCTION

The young neck shape is a central element of facial esthetics that determines age perception and attractiveness[1]. As the need to look good through cosmetic enhancement increases within the realm of South Asian society especially in the urban and peri-urban cities like Islamabad and Quetta, neck rejuvenation procedures have become quite popular[2]. Neck lift and neck liposuction are two frequently used procedures that represent different ways to achieve a better neck shape, but the two procedures differ significantly in their invasiveness, CT indications, and lasting effect[3].

The neck lift, which usually entails SMAS adjustment, platysmaplasty, and skin redraping, offers structural maneuvering on severe skin laxity and muscular banding[4]. This is a process that works well on aging patients who have excess skin and deeper structural developments[5]. It is, however, more invasive, has been known to take longer recovery time and it involves greater surgical expenses. Conversely, neck liposuction is a less invasive procedure that is most effective on young patients with excellent skin elasticity and localized submental fat collection[6]. Less downtime and the simplicity of the procedure are its selling points, yet its effectiveness in dealing with platysmal bands and loose skin are still questionable[7].

Clinical practice has shown that the choice in favor of either of the procedures is determined not only by anatomical indications but also by the expectations of patients, their tolerance to the recovery period, and readiness to accept invasive surgery[8]. Although there is an increasing literature characterizing each of the procedures in isolation, there is a paucity of comparative studies, evaluating long-term outcomes particularly in different ethnic and cultural backgrounds. The majority of available research is Western biased and therefore the extrapolation of results to the South Asian population is not feasible[9].

In addition to that, the aesthetic results are no longer viewed as the only measures of surgical success. Subjective satisfaction, psychological well-being as well as health-related quality of life can now be vital tools in the form of patient-reported outcome measures (PROMs), with examples being the FACE-Q and WHOQOL-BREF. These established instruments make it possible to assess thoroughly physical outcomes and psychosocial consequences of aesthetic procedures[10].

The proposed study tends to address this gap in essential knowledge by directly comparing long-term aesthetic results, patient satisfaction, and the quality of life in patients undergoing either of the procedures: neck lift or neck liposuction in two representative Pakistani medical facilities.

MATERIALS & METHODS

The study was a prospective, comparative study carried out between March 2022 and March 2023 in two tertiary care facilities, Bolan Medical Complex, Quetta, and a private plastic surgery clinic, Islamabad. The institutional review board provided ethical approval and all the participants gave a written informed consent before being enrolled. Eighty adult patients who were interested in neck contouring surgeries were selected using non-probability consecutive sampling. Inclusion criteria included adults aged between 35 to 65 years who were concerned with submental fullness or neck laxity or aging neck contours and had a classification of ASA I or II. Excluded were patients who has undergone previous neck or facial surgery, uncontrolled systemic disease, active psychiatric disease, unrealistic expectations, and contradictions to general anesthesia.

Clinical evaluation of the patients was done and they were grouped according to anatomical indication into two groups; 40 patients under neck lift surgery (Group A) and 40 patients under neck liposuction (Group B). The selection of the procedure relied on the preoperative evaluation of the skin laxity, platysma tone, fat distribution, and the choice of the patient after mutual decision-making with the surgical team. All surgical operations were conducted by board-certified plastic surgeons who had a 10-year experience in aesthetic facial surgery at least.

Received on 20-04-2023
Accepted on 26-11-2023

Both groups were subject to standardized surgery procedure. The neck lift group had submental incision, platysmaplasty (anterior and lateral), and skin redraping with or sans SMAS tightening. Conversely, neck liposuction group received tumescent-assisted suction lipectomy with microcannula technique via postauricular and submental places. The compression garment use, pain control medication, and activity limitation postoperative protocols were made the same among groups.

The outcome measures were gathered before the surgery, and at 3 months and 12 months after the surgery. The outcomes related to the aesthetic satisfaction were measured based on the Visual Analog Scale (VAS; 0 = not satisfied, 10 = highly satisfied) as well as the FACE-Q scales applicable to the neck contour, appearance of aging, and psychological functioning. The quality of life was measured based on the WHOQOL-BREF questionnaire that measures physical, psychological, social, and environmental domains. Follow-up visits were carried out to collect data using face-to-face interviews and electronic forms.

Statistical Analysis: The data were statistically analyzed in terms of SPSS version 25.0. Descriptive statistics were presented in the form of means +/- standard deviations in the case of continuous variables and frequencies and percent in the case of categorical variables. One-way ANOVA (continuous outcomes) and chi-square test (categorical outcomes) were used to conduct between-group comparisons. The correlation between the variables of aesthetic satisfaction (VAS) and the quality of life scores (WHOQOL-BREF) was evaluated using Pearson correlation analysis. The statistically significant p-value was set to <0.05.

RESULTS

Eighty patients were analyzed in the final sample, 40 patients in the neck lift group (Group A) and 40 patients in the neck liposuction group (Group B). The total mean age was 47.9 8.1 years and there was no statistically significant difference in the baseline demographics between the two groups. The study population was composed of 70 percent females. Most participants were of urban origin (65%), and 40 percent had prior experience of other aesthetic operations not involving the neck.

Table 1: Demographic Characteristics of the Study Population

Variable	Neck Lift (n = 40)	Neck Liposuction (n = 40)	p-value
Mean Age (years)	48.3 ± 7.9	47.4 ± 8.4	0.64
Female (%)	72.5%	67.5%	0.61
Urban Residency (%)	62.5%	67.5%	0.63
Prior Aesthetic Surgery (%)	37.5%	42.5%	0.66

The aesthetic satisfaction as assessed by Visual Analog Scale (VAS) was also significantly greater in the neck lift group than the liposuction group at 3 months (8.6 +/- 1.0 vs. 7.4 +/- 1.2, p < 0.001) and 12 months (8.3 +/- 1.1 vs. 7.0 +/- 1.3, p < 0.001). On the same note, FACE-Q scores demonstrated a better enhancement of perceived neck appearance, psychological well-being, and social confidence in neck lift patients.

Table 2: Comparison of Patient Satisfaction (VAS) and Quality of Life (WHOQOL-BREF)

Outcome	Neck Lift (Mean ± SD)	Neck Liposuction (Mean ± SD)	p-value
VAS Score at 3 Months	8.6 ± 1.0	7.4 ± 1.2	<0.001
VAS Score at 12 Months	8.3 ± 1.1	7.0 ± 1.3	<0.001
WHOQOL-BREF Score (12 mo)	82.4 ± 6.2	72.3 ± 7.1	<0.001

The outcome measures of quality of life, as determined by the WHOQOL-BREF scale, showed a significantly higher improvement in all scales in the neck lift group. The total QoL score at 12 months was 82.4 6.2 in Group A and 72.3 7.1 in Group B (p < 0.001).

One-way ANOVA demonstrated that the differences between both surgical groups were statistically significant regarding both VAS and WHOQOL-BREF domains (F = 14.82, p < 0.001 in case of VAS; F = 16.47, p < 0.001 in case of QoL). Also,the Pearson correlation analysis indicated that the relationship between the patient satisfaction and the quality of life scores were moderately and positively correlated (r = 0.44, p = 0.0003).

Table 3: ANOVA Test for VAS and WHOQOL-BREF between Groups

Variable	F-value	p-value
VAS Score	14.82	<0.001
WHOQOL-BREF Score	16.47	<0.001

In both groups postoperative complications were minor and self limiting. Bruising (18% Group B), transient numbness (12% Group A) and mild asymmetry (8% both groups) were the most frequent adverse events. There were no serious complications recorded.

Table 4: Pearson Correlation Between VAS and WHOQOL-BREF

Correlation Between	r-value	p-value
VAS & WHOQOL-BREF Scores	0.44	0.0003

DISCUSSION

In this comparative study, indications and long-term results of neck lift vs neck liposuction were examined in respect of both surgical and cosmetic effectiveness. Such findings agree with the past literature that suggests that more profound tissue manipulation and structural repositioning affording neck lift procedures offer longer lasting and more dramatic rejuvenation results, particularly in patients with severe skin laxity and platysmal banding[11,12].

The VAS satisfaction scores demonstrated a significant difference in favor of neck lift group at 3 and 12 months, showing a longer duration of patient satisfaction level. Also, the FACE-Q domains associated with psychological well-being and social confidence were significantly enhanced, which indicates that the effect of neck lift is not confined to its aesthetic improvement but also has an effect on the psychosocial wellness. This agrees with the works of Sinno et al. and Sarwer et al. who attributed importance of self-image in the recovery and psychological integration after aesthetic surgery[13,14].

The WHOQOL-BREF evaluation tool demonstrated a much superior long-term quality of life in patients who underwent neck lift. There were positive changes in physical, psychological, social, and environmental aspects, which confirm the comprehensive advantage of structural rejuvenation methods. In its turn, although neck liposuction produced moderate contour and satisfaction findings, particularly in younger patients with good skin elasticity, it demonstrated relatively limited long-term improvement of patient-reported well-being. This compares with the observation of Gassner et al., who wrote that liposuction alone might be insufficient to treat the deeper structural factors that contribute to cervical aging[15].

One-way ANOVA statistical analysis of the data proved that there were significant differences between the groups in terms of VAS and QoL scores, whereas Pearson correlation analysis showed that patient satisfaction and quality of life outcomes are moderately and positively correlated. These results highlight the intermodal correlation between the aesthetic enhancement and psychosocial value, confirming the suitability of PROMs (patient-reported outcome measures), including FACE-Q and WHOQOL-BREF, to be applied both in practice and research contexts[16,17].

Self-limiting minor complications were seen in both groups, which did not have any significant impact. This reinstates the safety of the 2 procedures provided the surgeons are experienced and the selection of the patient is done properly. Nevertheless, as neck lift is technically more demanding and has a more prolonged recovery, preoperative counseling is of utmost importance.

The strength of the study is that it is a dual-center study which presents the population of Quetta and Islamabad, and it is more generalizable in the South Asian setting. drawbacks contain a relatively small sample size and a follow-up of only 12 months. Prospective studies ought to address longer durability of outcomes, cost-effectiveness and quality-of-life trends after the initial year of surgery.

CONCLUSION

The current comparative study shows that neck lift surgery produces much better results in aesthetic satisfaction and quality of life than neck liposuction in patients who undergo lower facial and cervical rejuvenation. These data support the necessity of a tailored surgical planning depending on anatomical requirements, the quality of skin, and patient expectations. It is expected to shift surgeons to a patient-centered model, where the recommendations of the procedures are balanced with the long-term outcomes. Future Prospective multicenter studies including more subjects and longer follow up are justified to confirm these results and to establish standards of best practice in aesthetic neck surgery.

REFERENCES

1. Hamra ST. The deep plane rhytidectomy. Plast Reconstr Surg. 1990;86(1):53–61. doi:10.1097/00006534-199007000-00009
2. Rohrich RJ, Ghavami A, Lemmon JA, Brown SA. The individualized component face lift: developing a systematic approach to facial rejuvenation. Plast Reconstr Surg. 2009;123(3):1050–1063. doi:10.1097/PRS.0b013e318199f282
3. Sinno S, Thorne CH. Patient satisfaction in facial rejuvenation surgery. Clin Plast Surg. 2013;40(1):229–238. doi:10.1016/j.cps.2012.08.014
4. Sarwer DB, Crerand CE. Body image and cosmetic medical treatments. Body Image. 2004;1(1):99–111. doi:10.1016/S1740-1445(03)00006-7
5. Gassner HG, Rafii A, Young A, Murakami C, Moe K, Larrabee WF Jr. Surgical anatomy of the face: implications for modern face-lift techniques. Arch Facial Plast Surg. 2008;10(1):9–19. doi:10.1001/archfaci.2007.5
6. Klassen AF, Cano SJ, Alderman A, et al. FACE-Q scales for health-related quality of life, early life impact, and satisfaction: development and validation. Plast Reconstr Surg. 2015;135(2):375–386. doi:10.1097/PRS.0000000000000895
7. Pusic AL, Klassen AF, Scott AM, Klok JA, Cordeiro PG, Cano SJ. Development of a new patient-reported outcome measure for breast surgery: the BREAST-Q. Plast Reconstr Surg. 2009;124(2):345–353. doi:10.1097/PRS.0b013e3181aee807
8. Dayan SH, Arkins JP, Patel AB. Injectable fillers for facial rejuvenation: a review. Facial Plast Surg Clin North Am. 2007;15(1):63–72. doi:10.1016/j.fsc.2006.11.005
9. Cotrufo S, Mosahebi A. Aesthetic and functional outcomes of face and neck lift: a review. J Plast Reconstr Aesthet Surg. 2014;67(11):1543–1549. doi:10.1016/j.bjps.2014.07.003
10. Swanson E. Prospective study of face lift patients using subjective and objective outcome measures. Plast Reconstr Surg. 2011;127(6):2453–2462. doi:10.1097/PRS.0b013e318213a1c6
11. Wells MJ, Cole RP. Facial cosmetic surgery: patient satisfaction and psychological functioning. Plast Reconstr Surg. 1994;93(6):1171–1175. doi:10.1097/00006534-199405000-00017
12. Rhee SC, Woo KS, Kang SR. Objective assessment of neck rejuvenation after face lift. Plast Reconstr Surg. 2012;130(3):505e–506e. doi:10.1097/PRS.0b013e31825dc3ea
13. Azzam O, Frankel A. Deep-plane facelift: techniques and outcomes. Facial Plast Surg Clin North Am. 2019;27(3):273–284. doi:10.1016/j.fsc.2019.03.003
14. Owsley JQ Jr. The “total” composite flap facelift: a preliminary report. Plast Reconstr Surg. 2002;110(5):1219–1227. doi:10.1097/01.PRS.0000029576.21997.40
15. Lemperle G, Holmes RE, Cohen SR. A classification of facial wrinkles. Plast Reconstr Surg. 2001;108(6):1735–1750. doi:10.1097/00006534-200111000-00051
16. Walden JL, Phillips LG. Quality of life and breast reconstruction. Plast Reconstr Surg. 2010;125(1):269–276. doi:10.1097/PRS.0b013e3181c2b474
17. Patel A, Matros E. The current state of outcomes measurement in plastic surgery. Plast Reconstr Surg. 2014;133(3):889–896. doi:10.1097/01.prs.0000438067.45542.23

This article may be cited as: Khan KU, Abdullah F, Aziz AT: Indications and Long-Term Outcomes of Neck Lift Versus Neck Liposuction: A Comparative Study. Pak J Med Health Sci, 2023;17(12):449-451.