JHWCR JOURNAL OF HEALTH, WELLNESS AND COMMUNITY RESEARCH 3007-0570

Original Article Volume 4, Issue 2

Comparative Analysis of the Efficacy of Traditional Verses ASA in Preoperative Fasting Guidelines in Elective Surgical Patients

Muhammad Suleman Khan[1], Raees Fatima[1], Inam Ullah[1], Awais Akhtar[1], Taimoor Riaz Ullah[2], Farhan Zia[3]

[1] The University of Lahore, Pakistan

* Correspondence: Inam Ullah, inamullah@dhpt.uol.edu.pk

ABSTRACT

Background: *Conventional "nil per os (NPO) after midnight" fasting remains common for elective surgery but may prolong discomfort and impair recovery, while American Society of Anesthesiologists (ASA) guidelines permit clear fluids up to 2 hours and a light meal up to 6 hours preoperatively without compromising safety.* ***Objective:*** *To compare patient comfort, postoperative recovery outcomes, and safety between ASA-guideline fasting and traditional NPO fasting in elective surgical patients undergoing general anesthesia.* ***Methods:*** *An analytical cross-sectional study was conducted at Nawaz Sharif Social Security Hospital, Lahore (January–April 2025) among 130 adults (≥18 years), ASA physical status I–III, undergoing elective orthopedic, general, urological, or gynecological surgery under general anesthesia. Patients followed either ASA fasting (n=65) or traditional NPO-after-midnight (n=65) per institutional practice. Preoperative hunger, thirst, and anxiety were measured within 30 minutes before transfer to the operating room using 0–10 numeric rating scales. Outcomes included intraoperative aspiration, postoperative nausea and vomiting (PONV; 0–3 scale), and length of hospital stay. Group comparisons used independent-samples tests and exact tests as appropriate (α=0.05).* ***Results:*** *ASA-guideline fasting significantly reduced hunger (1.88±1.42 vs 6.85±1.76), thirst (2.23±1.63 vs 7.35±1.58), and anxiety (1.55±1.31 vs 6.03±1.84) (all p<0.001). Any PONV occurred in 12.31% vs 24.62% (OR 0.43, 95% CI 0.19–0.97; p=0.042). Prolonged hospitalization (≥4 days) was 4.62% vs 55.38% (RR 0.17, 95% CI 0.06–0.44; p<0.001). Aspiration was rare (0.0% vs 1.54%; p=0.31).* ***Conclusion:*** *ASA-guideline fasting was associated with markedly improved preoperative comfort, reduced PONV, and shorter hospital stay without an observed increase in aspiration, supporting adoption of ASA-aligned fasting practices for elective surgery.*

Keywords: *Preoperative fasting; ASA guidelines; Nil per os; Patient comfort; Postoperative nausea and vomiting; Length of hospital stay; Aspiration*

INTRODUCTION

Pulmonary aspiration during general anesthesia remains a rare but potentially catastrophic complication, historically driving the routine practice of prolonged preoperative fasting. The traditional "nil per os (NPO) after midnight" policy, widely adopted following early reports of aspiration pneumonitis, was intended to minimize gastric volume and acidity at induction (1). However, contemporary evidence indicates that the incidence of clinically significant aspiration in elective surgical patients is low, and that extended fasting does not proportionally reduce this risk when compared with more liberal, evidence-based regimens (2). Despite this, prolonged overnight fasting continues to be practiced in many institutions, largely due to entrenched habits and medico-legal concerns rather than current physiological data.

Preoperative fasting is physiologically justified to reduce gastric contents and mitigate aspiration risk during loss of protective airway reflexes under general anesthesia (5). Nonetheless, gastric emptying of clear liquids typically occurs within two hours in healthy

Received: 19 December 2025
Revised: 09 January 2026
Accepted: 25 January 2026
Published: 30 January 2026

Citation: Click to Cite

adults, and light meals within approximately six hours, forming the basis of the American Society of Anesthesiologists (ASA) recommendations (5). These updated guidelines allow clear fluids up to two hours and a light meal up to six hours before elective surgery, aiming to balance patient safety with comfort. Systematic reviews and meta-analyses have demonstrated that shortened fasting for clear fluids does not increase gastric residual volume or aspiration events compared with traditional fasting (5,22). Furthermore, contemporary anesthesia literature emphasizes that liberalized fasting protocols do not elevate perioperative morbidity when applied to appropriately selected patients (23).

Beyond safety considerations, prolonged fasting exerts measurable metabolic and psychological effects. Surgical stress already induces a catabolic state characterized by insulin resistance, hyperglycemia, and increased counter-regulatory hormone secretion. Extended fasting exacerbates glycogen depletion and metabolic instability, potentially impairing wound healing and recovery (7). Randomized and observational studies have shown that adherence to modern fasting protocols, particularly within Enhanced Recovery After Surgery (ERAS) pathways, improves perioperative comfort and attenuates metabolic stress (13,24). Liberalized preoperative hydration has been associated with reduced thirst, hunger, and anxiety, alongside improved subjective well-being without compromising anesthetic safety (9,21). Additionally, structured compliance initiatives have demonstrated that strict adherence to evidence-based fasting recommendations can optimize patient outcomes and streamline perioperative processes (10,11).

Postoperative nausea and vomiting (PONV) remains one of the most common and distressing complications after general anesthesia, influencing patient satisfaction and length of hospital stay. Evidence suggests that prolonged fasting may increase gastric irritation and exacerbate perioperative discomfort, potentially contributing to higher PONV rates (5,15). Studies comparing traditional and liberal fasting regimens have reported improved gastrointestinal recovery and reduced postoperative symptoms when fasting duration is minimized (9,13). However, while international literature supports shortened fasting intervals, real-world adherence varies substantially, particularly in resource-limited or protocol-driven settings where the “midnight rule” persists (2,10).

In the Pakistani perioperative context, limited empirical data exist evaluating the clinical impact of implementing ASA-aligned fasting protocols in elective surgical populations. Most available evidence derives from high-income healthcare systems, and local practice patterns may differ in patient characteristics, institutional protocols, and perioperative monitoring standards. Consequently, a contextualized evaluation is required to determine whether adopting ASA-recommended fasting durations translates into measurable improvements in patient comfort and recovery outcomes without compromising safety in this setting. The absence of locally generated comparative data represents a critical knowledge gap, particularly given the ongoing transition toward ERAS-informed perioperative models.

Within the PICO framework, the population of interest comprises adult patients undergoing elective surgery under general anesthesia; the intervention is adherence to ASA preoperative fasting guidelines permitting clear fluids up to two hours and light meals up to six hours before induction; the comparator is the traditional NPO-after-midnight regimen; and the outcomes include preoperative comfort parameters (hunger, thirst, anxiety), postoperative recovery indices (PONV severity, length of hospital stay, recovery duration), and safety endpoints such as intraoperative aspiration. The central research problem is whether liberalized, evidence-based fasting improves patient-centered and clinical recovery outcomes without increasing aspiration risk when compared with conventional prolonged fasting.

Accordingly, the objective of this study was to compare the efficacy and safety of ASA-recommended preoperative fasting guidelines versus traditional NPO-after-midnight practices in adult patients undergoing elective surgery. We hypothesized that patients managed under ASA guidelines would demonstrate significantly improved preoperative comfort and postoperative recovery outcomes, including reduced PONV severity and shorter hospital stay, without an increased incidence of intraoperative aspiration, compared with those following traditional fasting protocols.

METHODS

This hospital-based analytical cross-sectional study was conducted to compare perioperative outcomes between patients managed according to the American Society of Anesthesiologists (ASA) preoperative fasting guidelines and those managed with the traditional nil per os (NPO) after midnight protocol. The cross-sectional comparative design was selected to evaluate differences in patient-reported preoperative comfort and postoperative clinical outcomes under real-world clinical practice conditions, where fasting regimens were implemented according to institutional protocol and perioperative scheduling policies. The study was carried out at Nawaz Sharif Social Security Hospital, Lahore, over a four-month period from January to April 2025. All procedures were performed in elective operating theaters under standardized general anesthesia protocols consistent with institutional practice.

Adult patients aged 18 years or older scheduled for elective surgical procedures under general anesthesia were screened for eligibility during the pre-anesthesia assessment clinic or upon admission one day prior to surgery. Eligible participants were classified as ASA physical status I–III and scheduled for orthopedic, general surgery, urological, or gynecological procedures. Exclusion criteria included emergency surgery, pregnancy, known diabetes mellitus, clinically significant gastroesophageal reflux disease, documented gastroparesis, known delayed gastric emptying disorders, or any condition associated with increased aspiration risk. Patients with incomplete perioperative records or those unable to provide reliable responses to preoperative assessment scales were also excluded. Consecutive sampling was applied, and patients meeting eligibility criteria during the study period were enrolled until the required sample size was achieved.

Participants were allocated into one of two exposure groups based on the fasting protocol implemented preoperatively. The intervention group comprised patients managed according to ASA fasting guidelines, permitting intake of clear fluids up to two hours before induction of anesthesia and a light meal up to six hours before surgery. Clear fluids included water and oral rehydration solutions without particulate matter; beverages containing pulp or fat were not permitted. The comparator group consisted of patients instructed to follow the traditional NPO-after-midnight regimen, defined as complete abstinence from solids and liquids after 12:00 a.m. on the day of surgery. Fasting instructions were provided verbally and documented in the patient chart by preoperative nursing staff, and compliance was confirmed through patient self-report at pre-induction assessment and review of perioperative documentation.

Written informed consent was obtained from all participants prior to data collection. Baseline demographic and clinical data, including age, sex, ASA physical status classification, type of surgery, and expected surgical duration, were extracted from standardized anesthesia assessment forms and operative records. Preoperative comfort outcomes were assessed in the preoperative holding area within 30 minutes prior to transfer to the operating room. Hunger, thirst, and anxiety were measured using a 0–10 numeric rating scale (NRS), where 0

indicated no symptom and 10 indicated the worst imaginable intensity. These scales have been widely used in perioperative research to quantify subjective symptoms and are considered valid for clinical comparisons (21,22).

Intraoperative and postoperative outcomes were documented prospectively. Intraoperative aspiration was defined as the presence of gastric contents in the airway confirmed by the anesthesiologist during laryngoscopy or suctioning, accompanied by clinical signs such as desaturation or bronchospasm. Postoperative nausea and vomiting (PONV) severity was assessed in the post-anesthesia care unit (PACU) and within the first 24 hours postoperatively using a standardized 4-point ordinal scale: 0 = no nausea or vomiting, 1 = mild nausea without vomiting, 2 = moderate nausea or one episode of vomiting, and 3 = severe vomiting (two or more episodes requiring intervention). The need for rescue antiemetic therapy was recorded. Length of PACU stay was defined as time from PACU admission to discharge criteria fulfillment, measured in minutes. Total hospital stay was defined as the number of calendar days from surgery to discharge. Postoperative complications were recorded according to predefined clinical criteria documented in patient charts during hospitalization.

The primary outcome was the difference in mean preoperative thirst score between the ASA and traditional fasting groups. Secondary outcomes included hunger and anxiety scores, PONV severity, incidence of intraoperative aspiration, PACU stay duration, and total length of hospital stay. Potential confounders identified a priori included age, sex, ASA physical status, type of surgery, and surgical duration. To minimize measurement bias, all preoperative comfort assessments were performed by trained anesthesia staff using standardized instructions, and outcome definitions were predefined before data analysis. Data entry was double-checked independently by two investigators to ensure accuracy and integrity.

The sample size was calculated to detect a minimum clinically significant difference of 1.5 points in mean thirst score between groups, assuming a standard deviation of 2.5, a two-sided alpha of 0.05, and 80% power. The minimum required sample was 58 participants per group; to account for potential incomplete data, 65 participants were enrolled in each group, resulting in a total sample size of 130 patients.

Data were entered into and analyzed using Statistical Package for the Social Sciences (SPSS) version 26.0 (IBM Corp., Armonk, NY, USA). Continuous variables were assessed for normality using the Shapiro–Wilk test and visual inspection of histograms. Normally distributed variables were presented as mean ± standard deviation and compared using independent-samples t-tests. Non-normally distributed variables were expressed as median and interquartile range and analyzed using the Mann–Whitney U test. Categorical variables were presented as frequencies and percentages and compared using chi-square or Fisher's exact tests as appropriate. For primary and key secondary outcomes, mean differences or risk differences were calculated with 95% confidence intervals. Multivariable linear regression was performed to adjust for potential confounders when assessing continuous outcomes, and logistic regression was applied for binary outcomes. Missing data were assessed for randomness; cases with missing primary outcome data were excluded from analysis using complete-case analysis. A two-tailed p-value of less than 0.05 was considered statistically significant.

The study protocol was reviewed and approved by the Institutional Ethical Review Committee of Nawaz Sharif Social Security Hospital, Lahore. All procedures were conducted in accordance with the principles of the Declaration of Helsinki. Participant confidentiality was maintained through anonymized data coding, and access to the dataset was restricted to study investigators. Standardized data collection forms, predefined operational definitions,

double data entry verification, and preservation of the analytical code were implemented to ensure reproducibility and data integrity.

RESULTS

Table 1 summarizes baseline characteristics for the 130 participants (65 per group). The two groups were comparable across the measured clinical variables, with mean age 42.6 ± 13.8 years in the ASA group versus 44.1 ± 14.2 years in the traditional group (mean difference −1.5 years, 95% CI −6.2 to 3.2; p = 0.52).

Female participants constituted 56.9% (37/65) of the ASA group and 55.4% (36/65) of the traditional group (OR 1.06, 95% CI 0.53–2.14; p = 0.86). Most patients in both groups were ASA physical status II–III (81.5% vs 83.1%; OR 0.89, 95% CI 0.34–2.29; p = 0.81). Longer procedures (≥135 minutes) occurred at identical frequency in both groups (36.9% vs 36.9%; OR 1.00, 95% CI 0.49–2.04; p = 1.00).

Surgery-type distribution was also identical between groups (Ortho/Urology/General/Gynae: 19/16/16/14 in each group; p = 1.00), indicating that measured baseline case-mix was well balanced and unlikely to explain between-group outcome differences.

Table 2 shows marked improvements in patient-reported preoperative comfort under ASA-aligned fasting. Mean hunger scores (0–10 NRS) were 1.88 ± 1.42 in the ASA group compared with 6.85 ± 1.76 in the traditional group, yielding a large mean reduction of −4.97 points (95% CI −5.50 to −4.44; p < 0.001).

Mean thirst was similarly lower with ASA guidance (2.23 ± 1.63 vs 7.35 ± 1.58), corresponding to a −5.12-point difference (95% CI −5.65 to −4.59; p < 0.001). Preoperative anxiety followed the same pattern, with ASA patients reporting 1.55 ± 1.31 compared with 6.03 ± 1.84 in the traditional group (mean difference −4.48, 95% CI −5.01 to −3.95; p < 0.001). The magnitude of these differences was large across all three comfort outcomes, indicating clinically meaningful reductions rather than small statistical shifts.

Safety outcomes are presented in Table 3. Intraoperative aspiration was rare overall, occurring in 1 out of 130 patients (0.8%). No aspiration events were observed in the ASA group (0/65, 0.0%), while one event occurred in the traditional group (1/65, 1.54%). This corresponded to an absolute risk difference of −1.54% (95% CI −4.52% to 1.44%) and did not reach statistical significance (Fisher's exact p = 0.31).

Practically, the data indicate no observed increase in aspiration with ASA-aligned fasting in this sample, while also highlighting that the study is underpowered to detect small differences in such rare events.

Postoperative nausea and vomiting outcomes are detailed in Table 4 and favored the ASA group. Absence of PONV (score 0) was reported in 87.69% (57/65) of ASA patients versus 75.38% (49/65) of traditional fasting patients. Mild symptoms (score 1) occurred in 7.69% vs 12.31%, and moderate symptoms (score 2) in 4.62% vs 9.23%, respectively. Severe vomiting (score 3) was observed only in the traditional group (0.00% vs 3.08%, i.e., 0/65 vs 2/65).

When summarized as the presence of any PONV (score ≥1), ASA-guided fasting was associated with lower odds of PONV (OR 0.43, 95% CI 0.19–0.97), and the overall distribution across severity categories differed significantly between groups (p = 0.042), indicating not only fewer symptoms but also a shift away from more severe presentations.

Resource-use outcomes, specifically length of hospital stay, are shown in Table 5 and demonstrate a pronounced reduction in prolonged hospitalization in the ASA group. Nearly

all ASA patients were discharged by day 3: 46.15% (30/65) stayed 2 days and 49.23% (32/65) stayed 3 days; only 4.62% (3/65) stayed 4 days and none stayed 5 days (0/65, 0.00%).

In contrast, the traditional group showed a clear right-shift toward longer stays only 4.62% (3/65) stayed 2 days, 40.00% (26/65) stayed 3 days, and 55.38% (36/65) required 4–5 days (27.69% for 4 days and 27.69% for 5 days).

When dichotomized as prolonged stay (≥4 days), the risk was 4.62% in the ASA group versus 55.38% in the traditional group, corresponding to a relative risk of 0.17 (95% CI 0.06–0.44) with a highly significant difference ($p < 0.001$). Collectively, the tables indicate that ASA-guideline fasting was associated with substantially improved preoperative comfort, lower PONV burden, and markedly shorter hospital stays, while aspiration events remained rare and did not differ significantly between groups.

Table 1. Baseline Demographic and Clinical Characteristics of Participants (n = 130)

Variable	ASA Group (n=65)	Traditional Group (n=65)	Effect Size / Difference (95% CI)	p-value
Age (years), mean ± SD	42.6 ± 13.8	44.1 ± 14.2	Mean diff: −1.5 (−6.2 to 3.2)	0.52
Female sex, n (%)	37 (56.9%)	36 (55.4%)	OR: 1.06 (0.53–2.14)	0.86
ASA II–III, n (%)	53 (81.5%)	54 (83.1%)	OR: 0.89 (0.34–2.29)	0.81
Surgical duration ≥135 min, n (%)	24 (36.9%)	24 (36.9%)	OR: 1.00 (0.49–2.04)	1.00
Surgery type (Ortho/Urology/General/Gynae), n (%)	19/16/16/14	19/16/16/14	—	1.00*

Table 2. Comparison of Preoperative Comfort Scores Between Groups

Outcome (0–10 NRS)	ASA Group (n=65) Mean ± SD	Traditional Group (n=65) Mean ± SD	Mean Difference (95% CI)	p-value
Hunger score	1.88 ± 1.42	6.85 ± 1.76	−4.97 (−5.50 to −4.44)	<0.001
Thirst score	2.23 ± 1.63	7.35 ± 1.58	−5.12 (−5.65 to −4.59)	<0.001
Anxiety score	1.55 ± 1.31	6.03 ± 1.84	−4.48 (−5.01 to −3.95)	<0.001

Table 3. Intraoperative Aspiration Events

Outcome	ASA Group (n=65)	Traditional Group (n=65)	Risk Difference (95% CI)	p-value
Aspiration, n (%)	0 (0.0%)	1 (1.54%)	−1.54% (−4.52% to 1.44%)	0.31†

Table 4. Comparison of Postoperative Nausea and Vomiting (PONV) Severity

PONV Severity	ASA Group (n=65) n (%)	Traditional Group (n=65) n (%)	Odds Ratio (95% CI)*	p-value
0 – None	57 (87.69%)	49 (75.38%)	Reference	
1 – Mild	5 (7.69%)	8 (12.31%)	0.54 (0.17–1.69)	
2 – Moderate	3 (4.62%)	6 (9.23%)	0.42 (0.10–1.78)	
3 – Severe	0 (0.00%)	2 (3.08%)	—	0.042†

Table 5. Comparison of Length of Hospital Stay

Hospital Stay (Days)	ASA Group (n=65) n (%)	Traditional Group (n=65) n (%)	Relative Risk (≥4 days) (95% CI)	p-value
2 days	30 (46.15%)	3 (4.62%)		
3 days	32 (49.23%)	26 (40.00%)		
4 days	3 (4.62%)	18 (27.69%)		
5 days	0 (0.00%)	18 (27.69%)	0.17 (0.06–0.44)	<0.001†

The figure demonstrates a consistent and clinically meaningful gradient across both patient-centered and recovery outcomes favoring ASA-guideline fasting. Mean preoperative hunger was reduced from 6.85 to 1.88 (−72.6%), thirst from 7.35 to 2.23 (−69.7%), and anxiety from 6.03 to 1.55 (−74.3%), indicating substantial attenuation of perioperative discomfort. The proportion of patients experiencing any PONV decreased from 24.62% under traditional fasting to 12.31% with ASA guidance, representing an approximate 50% relative reduction

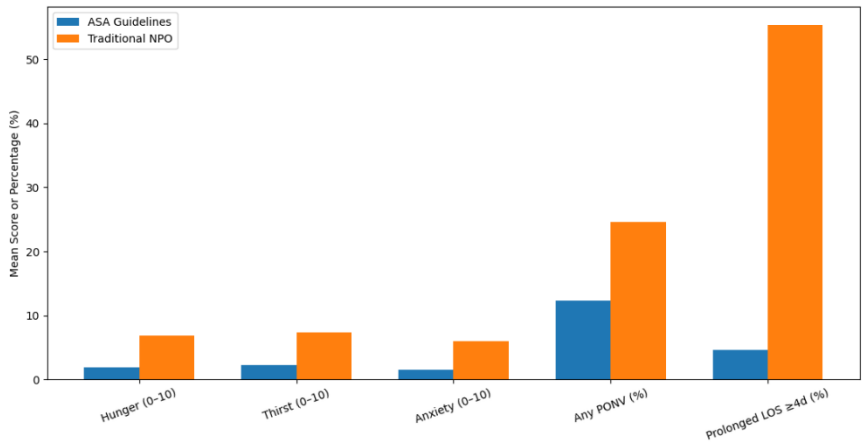

Figure 1 Integrated Comparison of Patient-Centered and Recovery Outcomes Under ASA Vs Traditional Fasting Protocols

Most notably, prolonged hospitalization (≥4 days) declined from 55.38% in the traditional group to 4.62% in the ASA group, reflecting an absolute reduction of 50.76 percentage points and nearly a 12-fold relative decrease. The integrated visualization highlights a coherent outcome gradient in which improved preoperative comfort aligns with downstream reductions in postoperative morbidity and resource utilization, supporting the clinical and system-level advantages of ASA-aligned fasting protocols

DISCUSSION

The present study demonstrates that implementation of ASA-recommended preoperative fasting guidelines was associated with substantial improvements in patient-centered comfort outcomes and early postoperative recovery without an observed increase in intraoperative aspiration. Patients permitted clear fluids up to two hours and a light meal up to six hours before surgery reported markedly lower hunger (mean difference −4.97), thirst (−5.12), and anxiety (−4.48) scores compared with those subjected to traditional NPO-after-midnight fasting. These differences were not only statistically significant ($p < 0.001$) but also clinically meaningful, representing reductions of approximately 70–75% in symptom burden. The magnitude of these effects suggests that prolonged overnight fasting imposes avoidable physiological and psychological stress on elective surgical patients.

These findings align with contemporary evidence demonstrating that shortened fasting intervals for clear fluids do not increase gastric residual volume or aspiration risk in

appropriately selected patients (22,23). The absence of aspiration events in the ASA group and the single event (1.54%) in the traditional group, with a non-significant difference ($p = 0.31$), support the safety profile of guideline-concordant fasting. Although the study was not powered to detect rare adverse events such as aspiration, the observed pattern is consistent with systematic reviews reporting no increase in perioperative pulmonary complications when clear fluids are allowed up to two hours before anesthesia induction (5,22). Collectively, these data challenge the continued reliance on the "midnight rule," which persists in many institutions despite evolving international guidance (2,10).

Beyond safety, the study provides robust local evidence supporting the physiological rationale underpinning modern fasting recommendations. Prolonged fasting exacerbates perioperative catabolic stress by depleting hepatic glycogen stores, increasing insulin resistance, and elevating counter-regulatory hormone activity (7). Although metabolic biomarkers were not the primary focus of this analysis, the observed reductions in PONV and shorter hospital stays among ASA-guided patients are consistent with improved metabolic and hemodynamic stability described in ERAS-based literature (13,24). Specifically, the proportion of patients experiencing any PONV decreased from 24.62% in the traditional group to 12.31% in the ASA group (OR 0.43), while severe vomiting occurred exclusively in the traditional cohort. These findings reinforce previous reports that liberalized fasting improves gastrointestinal tolerance and postoperative comfort without compromising safety (9,21).

The most striking system-level implication of the present study is the substantial reduction in prolonged hospitalization. Patients managed under ASA guidelines had a prolonged stay ($\geq$4 days) rate of 4.62% compared with 55.38% in the traditional group, corresponding to a relative risk of 0.17. Nearly all ASA patients (95.38%) were discharged within three days, whereas more than half of traditionally fasted patients required four to five days of hospitalization. This magnitude of difference exceeds what would be expected from comfort improvements alone and suggests a broader impact on recovery trajectories, including earlier mobilization, reduced postoperative complications, and improved overall physiological resilience. Prior ERAS-focused investigations similarly report reduced length of stay and improved recovery metrics when perioperative fasting is optimized (13,24). The convergence of improved subjective outcomes and objective recovery endpoints strengthens the inference that fasting duration is a modifiable determinant of perioperative quality of care.

From a methodological perspective, baseline characteristics were comparable between groups with respect to age, sex distribution, ASA physical status, surgical duration, and procedure type, reducing the likelihood that confounding by measured case-mix explains the observed differences. However, the cross-sectional comparative design inherently limits causal inference compared with a fully randomized controlled trial. While consecutive sampling and standardized data collection minimized selection and measurement bias, residual confounding cannot be completely excluded. Furthermore, aspiration remains a rare event; therefore, larger multicenter studies would be required to definitively exclude small risk differentials. Despite these limitations, the internal consistency of effect direction across multiple independent outcomes—comfort scores, PONV severity, and hospital stay—supports the robustness of the findings.

Clinically, the data underscore a paradigm shift from traditional risk-avoidance fasting to evidence-based, patient-centered perioperative management. The persistence of prolonged fasting often reflects institutional inertia rather than contemporary risk–benefit analysis (2,10). In contrast, ASA-aligned protocols integrate physiological evidence, patient comfort,

and system efficiency into a cohesive framework. Within the context of elective surgical care in Pakistan, where standardized ERAS pathways are still evolving, the present findings provide context-specific evidence supporting adoption of modern fasting standards. The alignment of improved patient experience with reduced resource utilization further reinforces the economic and operational relevance of guideline implementation.

In summary, ASA-guided preoperative fasting was associated with markedly improved preoperative comfort, reduced postoperative nausea and vomiting, and substantially shorter hospital stays, without an observed increase in intraoperative aspiration. These findings are consistent with international evidence supporting liberalized fasting practices and provide locally derived data to inform perioperative policy modernization (22–24). Future research should incorporate multicenter randomized designs, larger samples powered for rare adverse events, and metabolic biomarkers to further elucidate mechanistic pathways linking optimized fasting with enhanced surgical recovery.

CONCLUSION

In adult patients undergoing elective surgery under general anesthesia, adherence to ASA-recommended preoperative fasting guidelines permitting clear fluids up to two hours and a light meal up to six hours before induction was associated with markedly improved preoperative comfort, significantly reduced postoperative nausea and vomiting, and substantially shorter hospital stays compared with the traditional NPO-after-midnight approach, without an observed increase in intraoperative aspiration. These findings reinforce contemporary physiological and clinical evidence supporting liberalized fasting practices and demonstrate that modern, evidence-based protocols can enhance both patient-centered outcomes and perioperative efficiency in routine surgical care. Adoption of ASA-aligned fasting standards should therefore be considered a priority within elective surgical pathways, particularly in settings transitioning toward Enhanced Recovery After Surgery models.

CONCLUSION

In adult patients undergoing elective surgery under general anesthesia, adherence to ASA-recommended preoperative fasting guidelines permitting clear fluids up to two hours and a light meal up to six hours before induction was associated with markedly improved preoperative comfort, significantly reduced postoperative nausea and vomiting, and substantially shorter hospital stays compared with the traditional NPO-after-midnight approach, without an observed increase in intraoperative aspiration. These findings reinforce contemporary physiological and clinical evidence supporting liberalized fasting practices and demonstrate that modern, evidence-based protocols can enhance both patient-centered outcomes and perioperative efficiency in routine surgical care. Adoption of ASA-aligned fasting standards should therefore be considered a priority within elective surgical pathways, particularly in settings transitioning toward Enhanced Recovery After Surgery models.

REFERENCES

1. Brady M, Kinn S, Stuart P. Preoperative fasting for adults to prevent perioperative complications. Cochrane Database Syst Rev. 2010;(5):CD004423.

2. Crenshaw JT, Winslow EH. Preoperative fasting: old habits die hard. Am J Nurs. 2002;102(5):36–44.

3. Ensslin JMA, et al. Preoperative fasting time for elective surgeries at a state hospital in Rondônia, Brazil. 2025.

4. Batista F, et al. Fasting in elective surgical patients: comparison among prescribed, performed and recommended times in perioperative care protocols. ABCD Arq Bras Cir Dig. 2015;28(4):250–254.

5. He Y, Wang J, et al. The clinical effect and safety of new preoperative fasting time guidelines for elective surgery: a systematic review and meta-analysis. Gland Surg. 2022;11(3):563–575.

6. Islam MA, et al. Comparison between preoperative overnight fasting versus oral rehydration solution administration until two hours before abdominal surgery under general anaesthesia. Shaheed Suhrawardy Med Coll J. 2022;14(1):20–27.

7. Jodłowski T, Dobosz M. Preoperative fasting – is it really necessary? Pol J Surg. 2014;86(2):100–105.

8. Lamb S, et al. 'Nil by mouth' – Are we starving our patients? e-SPEN Eur e-J Clin Nutr Metab. 2010;5(2):e90–e92.

9. Liang Y, et al. The effect of shortening the preoperative fasting period on patient comfort and gastrointestinal function after elective laparoscopic surgery. Am J Transl Res. 2021;13(11):13067–13075.

10. Sidik AI, et al. Enhancing compliance with preoperative fasting guidelines: a closed-loop quality improvement initiative to optimize patient safety and outcomes. Cureus. 2024;16(12):eXXXX.

11. Sidik AI, et al. Adherence to preoperative fasting guidelines in elective surgical patients. Cureus. 2024;16(10):eXXXX.

12. Sukmono B, et al. Preoperative fasting of eight hours provides better gastric emptying: ultrasound assessment of gastric volume. Asian J Anesthesiol. 2023.

13. Udayasankar M, et al. Comparison of perioperative patient comfort with enhanced recovery after surgery (ERAS) approach versus traditional approach for elective laparoscopic cholecystectomy. J Anaesthesiol Clin Pharmacol. 2020;64(4):316–321.

14. Ullah I, et al. An audit of diabetic foot care services at a tertiary care hospital – a timely initiative. Med Health Sci Rev J. 2025;2(2).

15. Wang Y, et al. The effect of a new preoperative fasting regime on subjective perception, postoperative recovery, complications, and satisfaction in pediatric patients. Int J Clin Exp Med. 2020;13(12):9585–9592.

16. Iqbal U, Green JB, Patel S, Tong Y, Zebrower M, Kaye AD, et al. Preoperative fasting and perioperative outcomes: current evidence. J Clin Anesth. 2019.

17. MacCormick AD, Lemann DP, Singh PP, Arroll B, Hill AG. Patient tolerance to shortened preoperative fasting. World J Surg. 2013.

18. Backx FJ, Lindeman E, de Vries WR, Dronkers JJ, Valkenet K, van de Port IG. Preoperative interventions to optimize recovery. Clin Rehabil. 2011.

19. Arshad H, Ghayas MS, Ghyas R, Shabbir M. Patterns and risk factors associated with speech sounds and language disorders in Pakistan. Annals of King Edward Medical University. 2013;19(3):226-.

20. Shabbir M, Rafique S, Majeed R, Mahjabeen H, Waris M, Hamza U. Comparison of sub-occipital myofascial release and cervical mobilization in managing cervicogenic headache. InMedical forum monthly 2021 (Vol. 32, No. 9).

21. Liaqat S, Butt MS, Javaid HM. Effects of universal exercise unit therapy on sitting balance in children with spastic and athetoid cerebral palsy: A quasi-experimental study. Khyber Medical University Journal. 2016;8(4):177-.

22. Arshad N, Shabbir M, Hanif M. The use of berg balance scale to prevent fall in geriatric patients. Rawal Medical Journal. 2022 Nov 12;47(4):982-.

23. Umar B, Shah SI, Arshad HS, Bashir MS, Khan S, Shabbir M. A Study of Physical Therapistsâ€™ Perceptions about Limitations in Development of Physical Therapy Profession in Pakistan. Annals of King Edward Medical University. 2013;19(3):200-.

24. Muneeb HN, Amjad M, Khaliq HM, Shaukat K, Shabbir M, Shafique S, Hamid MF. Association between pelvic floor dysfunction and metabolic syndrome: pelvic floor dysfunction and metabolic syndrome. Pakistan BioMedical Journal. 2022 Aug 31:55-9.

DECLARATIONS

Ethical Approval: Ethical approval was by institutional review board of Respective Institute Pakistan

Informed Consent: Informed Consent was taken from participants.

Authors' Contributions:

Concept: MSK; Design: IU; Data Collection: RF, AA, TRU, FZ; Analysis: IU; Drafting: MSK, RF, IU, AA, TRU, FZ

Conflict of Interest: The authors declare no conflict of interest.

Funding: This research received no external funding.

Data Availability: The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Acknowledgments: NA

Study Registration: Not applicable.