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Breast

Enhanced Recovery after Surgery Protocol Decreases Length of Stay and Postoperative Narcotic Use in Microvascular Breast Reconstruction

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Background: Enhanced recovery after surgery (ERAS) protocols have demonstrated efficacy following microvascular breast reconstruction. This study assesses the impact of an ERAS protocol following microvascular breast reconstruction at a high-volume center.

Methods: The ERAS protocol introduced preoperative counseling, multimodal analgesia, early diet resumption, and early mobilization to our microvascular breast reconstruction procedures. Data, including length of stay, body mass index, inpatient narcotic use, outpatient narcotic prescriptions, inpatient pain scores, and complications, were prospectively collected for all patients undergoing microvascular breast reconstruction between April 2019 and July 2021. Traditional pathway patients who underwent reconstruction immediately before ERAS implementation were retrospectively reviewed as controls.

Results: The study included 200 patients, 99 in traditional versus 101 in ERAS. Groups were similar in body mass index, age (median age: traditional, 54.0 versus ERAS, 50.0) and bilateral reconstruction rates (59.6% versus 61.4%). ERAS patients had significantly shorter lengths of stay, with 96.0% being discharged by postoperative day (POD) 3, and 88.9% of the traditional cohort were discharged on POD 4 ($P < 0.0001$). Inpatient milligram morphine equivalents (MMEs) were smaller by 54.3% in the ERAS cohort (median MME: 154.2 versus 70.4, $P < 0.0001$). Additionally, ERAS patients were prescribed significantly fewer narcotics upon discharge (median MME: 337.5 versus 150.0, $P < 0.0001$). ERAS had a lower pain average on POD 0–3; however, this finding was not statistically significant.

Conclusion: Implementing an ERAS protocol at a high-volume microvascular breast reconstruction center reduced length of stay and postoperative narcotic usage, without increasing pain or perioperative complications. *(Plast Reconstr Surg Glob Open 2023; 11:e5444; doi: 10.1097/GOX.0000000000005444; Published online 14 December 2023.)*

INTRODUCTION

Enhanced recovery after surgery (ERAS) is a multimodal perioperative pathway that facilitates early recovery after major surgery.[1,2] Since its inception, ERAS has become widely adopted in various surgical subspecialties and has been shown to decrease length of stay (LOS) and inpatient narcotic use without any difference in morbidity.[1,3–10] The process begins with preoperative patient counseling, where the goals of the ERAS pathway are clearly outlined, and expectations for postoperative pain and discharge timing are firmly established. This commonly underappreciated element has demonstrated its efficacy in reducing postoperative narcotic use, increasing patient confidence in accelerated discharge, and enhancing patient understanding of when medical attention is required for potential postoperative complications.[11,12] The protocol also uses multimodal analgesics and local anesthetics to target multiple receptor sites,

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thereby minimizing narcotic consumption and medicinal side effects throughout the perioperative phases.[13] Postoperatively, the ERAS protocol encourages a quicker diet return, allowing for improved patient nutrition and expedited wound healing. The postoperative phase also advocates for early mobilization to accelerate recovery and reduce the risk of complications such as thromboembolism, pneumonia, muscle atrophy, and physical deconditioning. Lastly, ERAS prescribes the early removal of postoperative Foley catheters. This measure reduces urinary tract infection (UTI) risks and enables an earlier discharge. Although each component of the ERAS protocol individually contributes to improved surgical outcomes, the strength of ERAS lies in the synergistic effects of these strategies when combined; this creates a practical perioperative pathway that enhances patient safety and overall outcomes.

Despite wide acceptance, the ERAS pathway remains to be implemented as the mainstay for postoperative treatment in patients undergoing microvascular breast reconstruction due in part to the limited number of studies on the topic.[14–16] Although there is emerging literature on the subject, most of these studies either have a small sample size, differences in cohort demographics, or the absence of a comparison group.[14–16] Nonetheless, some studies do not have these drawbacks and overall support ERAS implementation; however, only a few have been published to date.[17–21] Recognizing this gap, we sought to re-evaluate the observed impact of the ERAS pathway on perioperative outcomes in comparison with a non-ERAS pathway. This research seeks to contribute to the existing literature by potentially strengthening the evidence base and reinforcing the consistency of data. Consequently, this endeavor may enhance the credibility and applicability of the ERAS protocols, specifically within the field of microsurgical breast reconstruction.

Our study aimed to compare postoperative outcomes between ERAS and pre-ERAS patients who underwent autologous breast reconstruction at our institution. We hypothesize that patients in the ERAS protocol will require less narcotic use, have a shorter LOS, and have no difference in postoperative complications compared with the traditional pre-ERAS group.

Takeaways

Question: Does the ERAS protocol improve postoperative outcomes compared with a traditional pathway in microvascular breast reconstruction?

Findings: Our study included 200 patients and compared postoperative narcotic use, length of stay, and complications. ERAS patients used 54.3% fewer inpatient narcotics, and had shorter stays, without increasing the complication rate.

Meaning: Implementing ERAS in microvascular breast reconstruction significantly reduces narcotic use and hospital stay without compromising patient safety.

METHODS

Institutional review board approval was received for this project (#23-000595). The study complied with ethical guidelines, and informed consent was obtained from all ERAS participants before participation in the study.

Study Design and Participants

Patients undergoing deep inferior epigastric perforator or transverse rectus abdominis myocutaneous microsurgical breast reconstruction at our institution were eligible for the study. Exclusion criteria included patients undergoing gluteal artery perforator, profunda artery perforator, and transverse upper gracilis flap procedures. In April 2019, the ERAS protocol was implemented, and its adoption by the five attending physicians within our department occurred over a period of 22 months.

All eligible patients who underwent microvascular breast reconstruction subsequent to the implementation of an ERAS protocol between April 4, 2019, and July 9, 2021, were included as the ERAS group. The traditional cohort included patients from surgeons who had not yet enrolled in ERAS, as well as patients who had surgery immediately before ERAS implementation. For the traditional cohort, data collection began with the last patient to undergo a non-ERAS perioperative protocol for autologous breast reconstruction at our academic center and continued until the cohort was equal in size to the ERAS cohort. The data for the ERAS group were collected prospectively, whereas the data for the traditional group were collected retrospectively. Data [including laterality, body mass index (BMI), operative time, days to return of diet, Foley removal date, LOS, inpatient narcotic use, output narcotic prescription, inpatient pain scores, and complications] were collected for both groups.

ERAS Protocol and Key Changes

Preoperative Counseling and Pain Control

In the ERAS protocol, attending surgeons led preoperative counseling to outline pathway goals, discuss narcotic reduction, and set discharge expectations for patients. In addition, patients received a set of nonopioid preoperative pain medications on the morning of surgery (Table 1). In contrast, the traditional cohort did not receive preoperative counseling or pain medication.

Intraoperative Pain Control

Intraoperative pain control alterations included the administration of IV acetaminophen (1000 mg), along with intraoperative transversus abdominis plane and pectoralis blocks with 0.25% bupivacaine with epinephrine. In contrast, the traditional pathway's intraoperative pain control was left to the discretion of the anesthesia team.

Postoperative Care

The ERAS protocol instituted changes in narcotic use, multimodal analgesia, return to customary diet, Foley catheter removal time-point, and discharge date. Most of these steps were not in place or occurred at a later postoperative time-point within the traditional cohort (Table 1).

Table 1. Perioperative Pathways

	Traditional	ERAS
Preoperative	None	Acetaminophen 1000 mg PO, celecoxib 400 mg PO, gabapentin 300 mg PO, ondansetron IV
Intraoperative	Discretion of anesthesia team, no nerve block	IV acetaminophen 1000 mg, intraoperative TAP block and pectoralis block with 0.25% bupivacaine with epinephrine
Postoperative		
POD 0	NPO, bedrest, maintenance IV fluids 135 mL/h, hydromorphone PCA	Clear liquid diet, bedrest, maintenance IV fluids 135 mL/h, Toradol 15 mg IV (post-anesthesia care unit), oxycodone 5 mg PO prn, acetaminophen 1000 mg q8h PO, celecoxib 200 mg PO q8h, gabapentin 300 mg PO q8h
POD 1	Clear liquid diet, continue IV fluids, q1h flap checks, hydromorphone PCA	Regular diet, saline lock IV, q1h flap checks, oxycodone–acetaminophen–celecoxib–gabapentin regimen same as POD 0, movement—out of bed, walk to the chair (in room)
POD 2	Regular diet, continue IV fluids, q2h flap checks, sliding scale oxycodone, NO NSAIDs, movement - out of bed, walk down the hall	Discontinue Foley, q2h flap checks, oxycodone–acetaminophen–celecoxib–gabapentin regimen same as POD 0, movement—out of bed, walk down the hall
POD 3	Saline lock IV, discontinue foley, q4h flap checks	Discharge home
POD 4	Discharge home	
Discharge medications	Oxycodone 5 mg (45–60 tablets), ondansetron 4 mg PO prn, Colace, Senna, MiraLax	Acetaminophen 1000 mg q8h, ibuprofen 400 mg q6h, gabapentin 300 mg q8h, ondansetron 4 mg PO q6h prn, oxycodone 5 mg (20 tablets) OR tramadol 50 mg (20 tablets) prn, Colace, Senna, MiraLax

Discharge Medications

Upon discharge, ERAS patients [discharged on postoperative day (POD) 3] received a regimen of acetaminophen, ibuprofen, gabapentin, and ondansetron for a period of 7 days, with oxycodone (20 tablets) or tramadol (20 tablets) on an as-needed basis. A regimen for constipation prevention was also prescribed. This differed from the traditional pathway (discharged on POD 4) where patients were sent home with oxycodone (45–60 tablets) and ondansetron, as well as constipation prevention medications. The traditional pathway did not include nonnarcotic pain medications in the discharge regimen.

Outcomes

MME Calculation

Both inpatient narcotic use and outpatient narcotics prescribed were represented as milligram morphine equivalents (MMEs). First, for each medication, the oral equivalent dose (mg) was multiplied by the total inpatient dose administered or total prescribed doses for outpatient use. This product was then converted into MME using the CONSORT classification conversion factor specified for each medication.[22] See Table 2 for conversion factors and an example calculation. Finally, the patient's overall MME was calculated as the sum of the MMEs across all medications received throughout their postoperative inpatient period and total prescribed medications.

Table 2. MME Conversion Factors

Medication	Conversion Factor
Codeine	0.150
Fentanyl (transmucosal)	0.125
Hydrocodone	1.000
Hydromorphone	4.000
Morphine	1.000
Oxycodone	1.500
Tramadol	0.100

Example: for a patient who received four, 5-mg PO oxycodone doses during their inpatient stay: (4×5) × 1.5 = 30MME.

Pain Score Calculation

Postoperative pain scores were collected for both cohorts. Our nursing staff administered a visual analog survey, asking patients to report their current level of pain, where 0 indicated no pain and 10 represented the most severe pain conceivable. These surveys were conducted before each scheduled administration of pain medication. The results from each survey were then added into each patient's medical record. It is important to note that the number of surveys each patient received varied daily, depending on the adherence of the nursing team to this step in the protocol. Patient factors such as sleep schedule and willingness to participate may have also affected this process. For analysis, we identified the median pain score for each POD for each patient and then compared averages between the cohorts.

Statistical Analysis

We evaluated patient and clinical characteristics and outcomes between the ERAS and traditional protocol groups using chi-square and t tests (or Wilcoxon rank-sum where appropriate), using a significance level of P less than 0.05. All statistical analyses were conducted in SAS 9.4 (SAS Institute, Cary, N.C.).

RESULTS

In this study, two duplicates were identified within the traditional cohort, leading to a total of 200 patients being included for analysis. The patients were divided into two groups: the traditional group (n = 99) and the ERAS group (n = 101). The median age of the traditional cohort was 54.0 years, compared with 50.0 years in the ERAS cohort (Table 3). The operative time was found to

Table 3. Traditional versus ERAS Patient Demographics and Clinical Outcomes

	Cohort			
	Total (N = 200)	**Traditional (N = 99)**	**ERAS (N = 101)**	***P***
Age, median (IQR)	51.0 (45.0, 59.0)	54.0 (45.0, 62.0)	50.0 (45.0, 56.0)	0.0960*
BMI, n (%)				0.6462*
Underweight	1 (0.5%)	1 (1.0%)	0 (0.0%)	
Normal	50 (25.0%)	26 (26.3%)	24 (23.8%)	
Overweight	93 (46.5%)	43 (43.4%)	50 (49.5%)	
Obese	56 (28.0%)	29 (29.3%)	27 (26.7%)	
Laterality, n (%)				0.7957†
Bilateral	121 (60.5%)	59 (59.6%)	62 (61.4%)	
Unilateral	79 (39.5%)	40 (40.4%)	39 (38.6%)	
Operative time (min), median (IQR)	491.5 (396.5, 567.0)	472.0 (367.0, 549.0)	519.0 (411.0, 578.0)	0.0291*
Return to diet (POD), n (%)				<0.0001†
1	101 (50.5%)	0 (0.0%)	101 (100.0%)	
2	99 (49.5%)	99 (100.0%)	0 (0.0%)	
Foley removal (POD), n (%)				<0.0001†
1	0 (0.0%)	0 (0.0%)	0 (0.0%)	
2	101 (50.5%)	0 (0.0%)	101 (100.0%)	
3+	99 (49.5%)	99 (100.0%)	0 (0.0%)	
Length of stay (d), n (%)				<0.0001‡
1	1 (0.5%)	0 (0.0%)	0 (0.0%)	
2	0 (0.0%)	0 (0.0%)	0 (0.0%)	
3	98 (49.0%)	2 (2.0%)	97 (96.0%)	
4	91 (45.5%)	88 (88.9%)	3 (3.0%)	
5+	10 (5.0%)	9 (9.1%)	1 (1.0%)	
Morphine equivalents (MME), median (IQR)				
Inpatient	108.1 (50.8, 190.1)	154.2 (87.1, 236.0)	70.4 (33.4, 149.0)	<0.0001*
Outpatient	200.0 (150.0, 337.5)	337.5 (225.0, 375.0)	150.0 (150.0, 150.0)	<0.0001*
Pain (POD), mean (SD)				
0	1.5 (1.8)	1.6 (1.9)	1.3 (1.8)	0.2761§
1	2.4 (2.1)	2.6 (2.1)	2.3 (2.0)	0.3494§
2	2.6 (1.9)	2.7 (1.9)	2.4 (1.9)	0.2454§
3	2.6 (2.1)	2.8 (1.9)	2.5 (2.2)	0.3099§
4	2.6 (2.0)	2.6 (2.0)	3.5 (2.0)	0.4282§
Complications, n (%)				
OR takeback (microvascular)	4 (2.0%)	4 (4.0%)	0 (0.0%)	0.0582‡
Hematoma	7 (3.5%)	5 (5.1%)	2 (2.0%)	0.2767‡
Flap necrosis	2 (1.0%)	1 (1.0%)	1 (1.0%)	0.9999‡
Constipation/ileus	4 (2.0%)	4 (4.0%)	0 (0.0%)	0.0582‡
UTI	2 (1.0%)	2 (2.0%)	0 (0.0%)	0.2438‡
ED readmission	3 (1.5%)	1 (1.0%)	2 (2.0%)	0.9999‡
Other	14 (7.0%)	6 (6.1%)	8 (7.9%)	0.6062†

†Chi square *P* value.
*Wilcoxon rank sum *P* value.
‡Fisher exact *P* value.
§Equal variance two sample *t* test.

be significantly different, with a median of 472 minutes in the traditional cohort and 519 minutes in the ERAS cohort ($P = 0.0291$). Rates of bilateral reconstruction were comparable between the groups, at 59.6% in the traditional group and 61.4% in the ERAS group. Additionally, the distribution of BMI was relatively the same between the two cohorts, with a similar number of patients classified as underweight (BMI < 18.5), normal (18.5 < BMI < 25), overweight (25 < BMI < 30), and obese (BMI > 30) (Table 3).

Median inpatient MME was 54.3% lower in the ERAS group compared with the traditional group (70.4 versus 154.2, respectively; $P < 0.0001$). There were no statistical differences in patient-reported pain outcomes between the two groups at POD 0–3. We also observed a statistically significant difference in the length of hospital stay after ERAS implementation, with 96.0% of patients in the ERAS group being discharged after 3 days, and 88.9% of those in the traditional group were discharged on POD4 ($P < 0.0001$).

There were no statistically significant differences between the two groups concerning hematomas, emergency department readmissions, seroma, UTI, or wound healing complications, although there were notably lower rates of microvascular takebacks (5.9% versus 0%) and ileus (3.9% versus 0%) in the ERAS group compared with the traditional group.

DISCUSSION

ERAS protocols, validated across various surgical specialties and endorsed by emerging literature, enhance patient outcomes through multimodal interventions across the perioperative period.[1,2,23–26] However, there remains a limited number of studies examining ERAS patients after microvascular breast reconstruction. Addressing this gap, our analysis provides further insights and adds to the growing evidence that supports the implementation of ERAS protocols in the context of this procedure. This amplification of evidence underscores the applicability of ERAS in microvascular breast reconstruction, providing surgeons with a robust, evidence-based approach that stands to significantly enhance patient care.

The opioid crisis has intensified scrutiny on narcotic prescribing practices, with statistics indicating one in 16 surgical patients evolves into a long-term opioid user, and higher dosages exacerbate this risk.[27–33] In this context, the ERAS protocol assumes a critical role with its emphasis on reducing narcotic use without exacerbating patient-reported pain levels. Our study showcases a 54% inpatient MME reduction in the ERAS group, without worsening pain scores. This aligns with prior research such as Astanehe et al and Sharif-Askary et al, who reported 88% and 80% reductions, respectively.[33,34] Notably, these studies varied in cohort characteristics such as age, BMI, and timing of reconstruction. In contrast, our cohorts were similar in these aspects, allowing us to ascribe the narcotic reduction directly to ERAS and bolstering the case for its broader adoption. Additionally, our more modest in-patient MME reduction may provide a more accurate representation of ERAS' opioid-reducing effects, given the similar cohort characteristics. Furthermore, our data demonstrated that we prescribed a median of 187.5 MME fewer narcotics upon discharge under the ERAS protocol compared with the traditional regimen. Unfortunately, we did not have the means to track the rate at which patients filled their prescriptions or the exact quantity of narcotics they consumed postdischarge. This limitation necessitates further research with a more detailed postdischarge follow-up, as this could provide a more comprehensive understanding of the ERAS protocol's effect on overall narcotic use in the patient journey following autologous reconstruction.

Reducing hospital LOS is undoubtedly beneficial, offering gains in patient satisfaction, cost-effectiveness, and reduced risk of hospital-acquired infections.[35,36] Previous research has cited reductions in LOS by up to 3 days within ERAS cohorts.[15,19,34,37–39] Our study similarly found a positive trend in reduced hospital stays, noting a decrease in LOS by 1 day. This aligns with the average decrease of 1.3 days observed after ERAS protocol implementation at other institutions.[40,41] It is crucial to note that our study's cohorts exhibited a difference in operative time, similar to Sharif-Askary et al. However, unlike their study, we do not attribute the decreased LOS to this demographic difference.[33] Current literature reports that a longer duration of exposure to general anesthetics is linked to delayed ambulation and delayed return of bowel function, both of which may extend LOS.[42] Interestingly, despite longer anesthesia exposure, our ERAS cohort exhibited earlier ambulation and discharge. In this context, it is imperative to highlight the often undervalued role of preoperative counseling in shaping discharge expectations. This element serves a dual purpose: it mentally prepares patients for the surgical and postoperative stages, thereby improving compliance with discharge guidelines, and simultaneously increases patient confidence in the safety of accelerated discharge. Furthermore, our average discharge of POD 3 is among the shortest durations reported for this procedure, comparable to the findings of Bonde et al.[37] Our study extends their findings by including a 60% bilateral reconstruction rate, thereby broadening the applicability of this protocol in autologous breast reconstruction.

Reducing hospital LOS offers significant benefits, but it is crucial that this goal be balanced with appropriate patient safety. Premature discharge could inadvertently lead to heightened readmission rates and poorer health outcomes, undermining the very benefits healthcare teams aim to achieve through shorter LOS. The potential for such a counterproductive scenario is the impetus for monitoring perioperative outcomes after ERAS implementation. In our study, the effects of the ERAS protocol on postoperative complications (specifically, emergency department readmissions, seromas, UTIs, and wound healing complications) were examined. Consistent with prior research, we found no difference in these complications between the groups.[15,19,32,34,38,39] Despite the use of nonsteroidal anti-inflammatory drugs (NSAIDs) in the ERAS group, our study did not demonstrate increased rates of bleeding complications. This insight reassures the safety of NSAID use in the ERAS protocol. Also, an interesting finding was that despite the ERAS group having their Foley catheter removed a day ahead of the traditional group, there was no observable difference in UTI incidence. This theorized benefit of early Foley removal as a part of ERAS protocols has not proved to be statistically significant in any ERAS specific studies. Regardless, this assumption remains compelling given that studies assessing catheter related UTIs showcase that each additional day of Foley use increases the risk of UTI by approximately 5%.[43] Moreover, removing the Foley catheter on POD 2 per ERAS protocol, as opposed to POD 3 (pre-ERAS), allowed patients to meet a critical milestone for discharge at an earlier timepoint, proving its pragmatic value in the context of ERAS protocols. Furthermore, we observed a nonsignificant trend toward decreased rates of microvascular takebacks and ileus in the ERAS group. Although further research is needed to assert this novel benefit, we believe our other findings provide data confirming the safety and efficacy of the ERAS protocol in microvascular breast reconstruction.

Although our study provides insights into the benefits of ERAS protocols in microvascular breast reconstruction, it is important to acknowledge several limitations. First, our study was conducted at a single institution, which may limit the generalizability of our findings. Different institutions may have distinct practices, resources, and patient populations that could be associated with the outcomes of ERAS implementation. Second, we had no follow-up data regarding patient postdischarge narcotic use, which leaves the potential for misinterpretation of our findings.

This lack of data on actual patient consumption of prescribed narcotics postdischarge makes it difficult to fully understand the impact of ERAS protocols on overall narcotic use following discharge. Third, the evaluation of postoperative complications was limited to those recorded in the patient medical record at the 30-day postoperative time-point. Complications that may have arisen outside of this timeframe or those managed at different health facilities would not have been captured. A further limitation is the methodological discrepancy in data collection; data for the ERAS group were gathered prospectively, whereas it was collected retrospectively for the traditional group. This could introduce bias and affect the comparability of the two groups. The final limitation concerns the reduction in LOS seen with the ERAS protocol; a finding that is not uniformly observed across autologous reconstruction ERAS studies.[33] In our study, clearance for patient discharge was based on several criteria, such as tolerance of an oral diet, mobility, and discontinuation of Foley catheter usage. These discharge criteria were introduced and/or assessed earlier in all ERAS patients, thus potentially introducing bias. The pre-ERAS patients were not provided with the same early opportunity to demonstrate their capability to meet these discharge tasks, which may have inadvertently influenced the perception of their readiness for discharge, potentially skewing the comparison.

Implementation and Recommendation

The ERAS protocol was integrated into our existing EMR system. Oversight of the pathway was provided through a collaborative framework involving attending physicians, surgical residents, nursing staff, and a nurse practitioner dedicated to plastic and reconstructive surgery inpatient care. Under the supervision of the lead surgeon for each case, these team members were crucial in ensuring consistent adherence to the protocol. Their roles spanned from monitoring patient progress to administering medications aligned with ERAS guidelines, and updating the EMR system for real-time compliance. To prepare the team for these roles, we conducted training centered on patient well-being, encompassing the new perioperative techniques and presenting literature on the improved outcomes observed following ERAS application in diverse surgical environments. Despite the systematic approach, challenges were inevitable. Monthly interdisciplinary meetings served as a forum for addressing concerns like team synchronization and protocol consistency. Periodic audits identified these challenges, which were then resolved through targeted interventions. For institutions considering a similar initiative, we advocate forming a multidisciplinary team, prioritizing patient-oriented training, and establishing regular audit mechanisms. This comprehensive strategy has significantly enhanced both the implementation and compliance of the ERAS pathway at our institution.

CONCLUSIONS

The use of an ERAS protocol significantly improved postoperative outcomes for patients undergoing microvascular breast reconstruction at our institution. The protocol notably incorporates alterations in preoperative counseling, pain management, and postoperative care. These changes have led to reductions in both inpatient and prescribed narcotic quantities while maintaining pain control, thus contributing to the larger efforts to mitigate the opioid crisis. It also resulted in a statistically significant decrease in postoperative inpatient stay, without an associated increase in postoperative complications. This study further highlights the potential of ERAS protocols to optimize patient outcomes, decrease healthcare costs, and enhance patient experiences. Our study confirms that this protocol represents a significant advancement in perioperative care for patients undergoing microvascular breast reconstruction, offering benefits that align with the goals of modern healthcare: high quality, patient centered, and cost effective.

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DISCLOSURE

The authors have no financial interest to declare in relation to the content of this article.

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