

Research Progress of Humanistic Care in Perioperative Rapid Recovery of Integrated Traditional Chinese and Western Medicine

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Abstract: *With the widespread adoption of the Enhanced Recovery After Surgery (ERAS) concept, perioperative nursing models have gradually shifted from a “disease-centered” approach to a “patient-centered” one. Integrated Traditional Chinese and Western Medicine (TCM) Enhanced Recovery After Surgery (ERAS) significantly shortens the patient recovery period by combining modern medical technologies with the distinctive features of traditional Chinese medicine. Humanistic care nursing, as a critical component in enhancing patient psychological support and quality of life, further reinforces the advantages of this model. This article reviews recent advancements in the application of humanistic care nursing and integrated TCM-ERAS in perioperative care, providing reference suggestions for subsequent clinical practice.*

Keywords: Perioperative period, Rapid recovery, Integrated traditional Chinese and Western medicine, Humanistic care.

1. Introduction

The integrated application of Enhanced Recovery After Surgery (ERAS) with humanistic care interventions during perioperative care not only focuses on the rapid recovery of patients' physiological functions postoperatively but also aims to enhance psychological support and overall quality of life through strengthened humanistic care. Current clinical practice demonstrates that although the ERAS model has shown significant efficacy in promoting patient recovery, its intervention content remains relatively limited, particularly in improving patients' mental health. Therefore, both academia and clinical practice widely advocate for the systematic integration of humanistic care interventions on the basis of ERAS [1, 2]. Studies indicate that humanistic care nursing can effectively promote the recovery process of surgical patients, alleviate their negative psychological states, enhance surgical safety, and positively impact the improvement of postoperative quality of life [3]. Currently, while there have been some explorations into the application of humanistic care in the integrated Chinese and Western medicine perioperative ERAS, it is still in the preliminary stage of system construction and standardized development. This article will systematically analyze and discuss the implementation pathways of specific interventions and the evaluation of clinical application effects, combining the latest research progress and practical cases.

2. Core Measures of Humanistic Care in Integrated Traditional Chinese and Western Medicine ERAS

2.1 Team Building and Emotional Support

In the initial implementation of the Integrated Traditional Chinese and Western Medicine Enhanced Recovery After Surgery (ERAS) model, the primary step is to establish a high-quality, specialized nursing team. This team should consist of experienced nursing staff with solid theoretical

knowledge, extensive clinical practice experience, and systematic training and assessment, ensuring their ability to standardize and effectively implement ERAS principles in perioperative care while integrating humanistic care practices. Additionally, emphasis should be placed on strengthening communication with patients, using successful case examples to inspire and encourage them [4].

2.2 Visual Health Education Combined with Appropriate Traditional Chinese Medicine Techniques

The study adopted immersive scenario simulation training (e.g., virtual operating room experience) combined with Traditional Chinese Medicine (TCM) emotional therapy [5]. In the “Guangdong Provincial Pilot Project for Standardized Perioperative Rapid Rehabilitation Services for Inpatients Undergoing Surgery,” Guangdong Provincial Hospital of Traditional Chinese Medicine used minimally invasive thyroid surgery as a case study. Through video and graphic materials, patients were assisted in understanding the surgical procedure, thereby reducing anxiety caused by uncertainty. Immersive preoperative education was implemented, supplemented by auricular acupressure (Shenmen and subcortical acupoints) to alleviate insomnia and tension, significantly improving compliance. The Hospital Anxiety Rating Scale (HAMA) score decreased by 40%, and patients' awareness of the treatment plan increased to 89% [6].

The combined application of Traditional Chinese Medicine (TCM) emotional nursing intervention and Zi-Wu Liu-Zhu acupoint massage in post-stroke hemiplegia patients enhances psychological resilience and rehabilitation training compliance, while also promoting limb function and daily living activity recovery [7]. Psychological intervention integrates TCM emotional regulation, where emotional therapy and five-tone therapy (e.g., the five elements corresponding to the five zang organs) are employed to modulate patients' psychological states. For instance, postoperative patients with cerebral hemorrhage may receive five-tone therapy (using horn-toned music corresponding to

the liver meridian) to alleviate liver qi stagnation, combined with acupuncture (Baihui and Neiguan acupoints) to facilitate neural function recovery.

Preoperative interventions: Integration of emotional regulation and Traditional Chinese Medicine (TCM) techniques: Preoperative anxiety is alleviated through Five Elements music therapy and Baduanjin (Eight-Section Brocade) training, complemented by auricular acupressure (e.g., Shenmen, Pishijia points) to improve sleep quality. For instance, Guangdong Provincial Hospital of Traditional Chinese Medicine implemented a “prehabilitation program” for gastric cancer patients, combining TCM constitution identification to develop personalized dietary plans, resulting in a 35% increase in patient compliance [8]. Narrative medicine and family involvement: Video and graphic education are utilized to reduce patients’ fear of surgery, while encouraging family participation in decision-making. Studies demonstrate that family collaboration models can reduce postoperative complication rates by 22%.

Intraoperative management: Empathetic application of combined acupuncture and drug anesthesia: In thyroid cancer surgery, cervical plexus anesthesia combined with electroacupuncture stimulation at Hegu (LI4) and Neiguan (PC6) points reduced the dosage of opioid medications, leading to a 15% decrease in postoperative delirium incidence. Nurses maintained patient emotional stability through verbal reassurance during surgery, significantly lowering intraoperative stress responses [5, 9].

Postoperative Rehabilitation: Combination of multimodal analgesia and traditional Chinese external therapy: Non-steroidal anti-inflammatory drugs (NSAIDs) combined with mirabilite (Mangxiao) application on the umbilicus and herbal fumigation to alleviate postoperative pain, while music therapy is employed to divert patients’ attention. For instance, Nanjing Hospital of Integrated Traditional Chinese and Western Medicine adopted acupuncture to relieve abdominal distension in gastric cancer patients, reducing the time to first flatus to within 12 hours. For elective surgery patients, auricular acupressure was performed using Shenmen (GV26) and subcutaneous points as primary acupoints, aiming to stimulate meridians, harmonize yin and yang, and calm the mind, thereby effectively alleviating anxiety and significantly improving sleep disorders caused by postoperative pain and anxiety.

Early mobilization and personalized care: Encourage ambulation within 24 hours postoperatively, combined with traditional Chinese massage (Huan Tiao, Cheng Fu acupoints) to prevent muscle atrophy, while establishing a “pain diary” for dynamic assessment of patient needs [8, 9]. Postoperative gastrointestinal function regulation: Apply mirabilite to the umbilicus and ear acupressure (San Jiao, Jiao Yang acupoints) to promote intestinal peristalsis, reducing the time to first flatus to within 12 hours [3-5].

2.3 Personalized Pain Management

Multimodal Analgesia (MMA) combined with Traditional Chinese Medicine (TCM) techniques: Western non-steroidal anti-inflammatory drugs (NSAIDs) combined with TCM

acupoint stimulation (e.g., dexamethasone injection at the Neiguan point, external application of Chengqi Decoction to the umbilicus) reduce opioid dependence. Postoperative pain scores (Visual Analogue Scale, VAS) in gastric cancer patients decreased by 50%, with a 30% reduction in analgesic medication use [10]. Nanjing Integrated Traditional Chinese and Western Medicine Hospital employed acupuncture to alleviate abdominal distension in bladder tumor patients, enabling them to ambulate on the second postoperative day. Integration of TCM massage with Western rehabilitation: For example, postoperative patients with femoral head necrosis received TCM massage (Huan Tiao, Cheng Fu points) combined with modern muscle strength training to prevent muscle atrophy and accelerate joint function recovery.

2.4 Application of Traditional Kung Fu Techniques to Improve Negative Emotions

Studies [8] indicate that preoperative patients often experience anxiety, tension, and even insomnia due to fear, leading to adverse psychophysiological stress responses. This may prevent them from undergoing surgery in a satisfactory state or even delay the procedure, ultimately affecting postoperative recovery. Therefore, preoperative education is crucial. In addition to routine health education and the administration of sedatives or hypnotics when necessary, Traditional Chinese Medicine (TCM) emotional therapy based on the Five Elements theory can be employed. Practices such as Wuqinxi (Five Animal Exercises) and Baduanjin (Eight-Section Brocade) can also positively regulate immune function and improve cardiopulmonary performance.

2.5 Environmental Optimization and Emotional Connection

The model nursing unit and humanistic care team: For instance, the ‘Humanistic Nursing Model Ward’ at Jianyang People’s Hospital enhances nursing quality through comfortable environment design (e.g., constant-temperature saline irrigation, herbal fumigation) and empathy training [11].

Family involvement in nursing: Encouraging family participation in preoperative decision-making and postoperative rehabilitation. For instance, Guangdong Provincial Hospital of Traditional Chinese Medicine has reduced the incidence of postoperative complications in elderly lung cancer patients through family collaborative health education.

3. Clinical Efficacy of Humanistic Care Measures

3.1 Shortening Rehabilitation Period and Length of Hospital Stay

In the standardized pilot program for minimally invasive thyroid surgery at Guangdong Provincial Hospital of Traditional Chinese Medicine, patient hospitalization was reduced to 2 days, with a 30% decrease in postoperative complication incidence [12]. For patients undergoing unicondylar replacement, integrated traditional Chinese and Western medicine rehabilitation (postoperative acupuncture +

early mobilization) enabled ambulation within 24 hours postoperatively, reducing the average hospital stay to 5 days [13].

3.2 Enhancing Patient Subjective Experience and Satisfaction

Patients with intracerebral hemorrhage (ICH) achieved full recovery from bed rest to independent ambulation and complete restoration of speech function within 21 days through integrated traditional Chinese and Western medicine therapy (acupuncture + scenario-based simulation training), with a satisfaction rate of 95% [14]. In the ERAS ward of hepatobiliary and pancreatic surgery, patients demonstrated an acceptance rate of 89% for the “acupoint application + narrative medicine” combination, with a 40% reduction in anxiety scores (HAMA) [1, 14].

3.3 Acceleration of Physiological Parameter Recovery

The study evaluated postoperative recovery dimensions including time to flatus, bowel movement, first food intake, bowel sound recovery, nutritional parameters, negative emotions, and quality of life. Biochemical analyzers were used to measure transferrin, hemoglobin, and prealbumin levels. Anxiety was assessed using the Self-Rating Anxiety Scale (SAS), while depression was evaluated with the Self-Rating Depression Scale (SDS) and Hamilton Depression Rating Scale (HAMD). Quality of life was measured through the Short Form 36 (SF-36) scale, covering social functioning, emotional well-being, health status, and energy levels. Compared to the control group, the observation group showed statistically significant differences [15]. The incidence of postoperative complications in the observation group was 2.86%, significantly lower than the control group's 20.00% [16]. For thyroid cancer radical surgery, the Psychological Resilience Inventory (CD-RISC) was administered to both groups before intervention and discharge, with statistically significant results observed [17].

3.4 Reduction of Complications and Healthcare Costs

The application of ERAS principles (preoperative respiratory training + postoperative multimodal analgesia) in elderly lung cancer patients during the perioperative period reduced the incidence of pulmonary infection from 12% to 4%, with a 20% decrease in medical costs [15].

Patients with osteonecrosis of the femoral head achieved a 78% hip preservation success rate through integrated traditional Chinese and Western medicine bionic hip-preserving therapy (TCM + minimally invasive bone grafting), thereby avoiding the long-term financial burden of joint replacement [8].

3.5 Promoting Multidisciplinary Collaboration and Standardization

The “Perioperative Full-Chain Service Standard” promoted by Guangdong Provincial Hospital of Traditional Chinese Medicine has been incorporated into the local standards of the Greater Bay Area, covering 12 integrated traditional Chinese and Western medicine techniques (such as auricular bean pressing and Wuzi heat-relieving moxibustion) [2, 14]. The

integrated traditional Chinese and Western medicine stroke treatment protocol established by Jiangyong County Medical Community General Hospital has reduced the average rehabilitation cycle by 30%, with a functional recovery excellence rate of 82.6% [9].

4. Multidimensional Validation of Clinical Outcomes

4.1 Improvement of Physiological Parameters

This model demonstrates significant efficacy in patients undergoing gastrointestinal, hepatobiliary, and orthopedic surgeries, with positive impacts not only on quality of life, sleep quality, and patient satisfaction but also on alleviating postoperative pain and promoting limb nerve and motor function. During the perioperative period, a series of appropriate integrated traditional Chinese and Western medical techniques are employed, such as preoperative auricular acupressure and five-tone therapy for anxiety relief, postoperative moxibustion and acupuncture to enhance gastrointestinal motility, and traditional exercises to facilitate the recovery of limb sensory and motor functions, supplemented by comprehensive pain management and emotional support throughout the process.

A prospective randomized controlled trial published in the Journal of NeuroEngineering and Rehabilitation in 2025 demonstrated that electroacupuncture significantly reduced postoperative morphine dosage by 51.6% (12.5 ± 3.2 vs 25.8 ± 5.6 mg) within 72 hours in terms of analgesic efficacy and drug dependence. In functional recovery, the Ankle Joint Score (AKS) at 6 months postoperatively was significantly higher (96.02 ± 1.29 vs 85.82 ± 1.93), with greater range of motion (120.04° vs 89.94°). Hospitalization duration was also significantly shortened (5.72 ± 1.88 vs 8.82 ± 2.09 days). The study confirmed that electroacupuncture exerts a dual-pathway analgesic mechanism by modulating the hypothalamus (release of enkephalin) and the pons (release of dynorphin), synergizing with Enhanced Recovery After Surgery (ERAS). This provides advanced physiological evidence for the “clear higher neural central mechanism underlying analgesic effects,” surpassing the level of mere functional observation.

In terms of tumor surgery, systemic inflammation and stress responses were alleviated. As reported in *Computational and Mathematical Methods in Medicine*, plasma cortisol levels in the intervention group (426.54 ± 52.15 nmol/L) were significantly lower than those in the conventional group (508.32 ± 41.08 nmol/L) at 24 hours postoperatively. Key inflammatory markers such as CRP, IL-6, IL-8, and TNF- β also exhibited significantly lower levels at various postoperative time points. The direct correlation between psychological improvement (reduction of anxiety) and objective physiological indicators (decreased stress hormones such as cortisol) confirmed that the overall improvement in both physical and mental health shares a common biological basis.

In promoting the recovery of specific organ functions, Traditional Chinese Medicine (TCM)-based Enhanced Recovery After Surgery (ERAS) demonstrates superior

efficacy in suppressing the release of early postoperative inflammatory factors (e.g., IL-1 β , TNF- α) in elderly lung cancer patients, thereby facilitating the recovery of pulmonary function parameters after extubation. In cesarean section patients, the combination of TCM and ERAS significantly shortens the time to first flatus and ambulation, while reducing postoperative levels of leukocytes, C-reactive protein (CRP), and D-dimer within 72 hours, indicating its capacity to alleviate traumatic stress and promote systemic recovery. Additionally, it regulates immune function. A 2021 study revealed that in rectal cancer patients, the integrated TCM-ERAS regimen significantly increased the proportion of CD4 $^{+}$ T cells and the CD4 $^{+}$ /CD8 $^{+}$ ratio on postoperative day 3, while simultaneously lowering inflammatory markers. This suggests that the regimen may promote recovery by modulating immune function.

Patients undergoing unicompartamental knee arthroplasty (UCA) achieved a 30% reduction in joint function recovery time and a 20% decrease in hospitalization costs through postoperative acupuncture combined with early mobilization [18-19]. In the ERAS ward of hepatobiliary and pancreatic surgery, integrated traditional Chinese and Western medicine nursing reduced the incidence of postoperative intestinal obstruction to 3% (compared to 10% in the conventional model) [20].

4.2 Enhancement of Psychological and Social Functions

Stroke patients who underwent “Five Animal Exercises + situational simulation training” achieved recovery from bed rest to independent walking within 21 days, with a 45% reduction in the Depression Scale (SDS) score [21]. In elderly lung cancer patients, the participation-based nursing model for family members resulted in a 28% improvement in the Social Functioning Status Questionnaire (SF-36) score postoperatively.

Multiple studies have confirmed that this model can effectively alleviate patients’ anxiety and depressive symptoms, while significantly improving quality of life, sleep quality, and nursing satisfaction. A 2024 study identified that the integrated Chinese and Western medicine ERAS approach significantly reduced postoperative plasma cortisol (a core stress hormone) and inflammatory cytokines such as IL-6 and TNF- β . This provides high-level evidence-based medical support for the physiological basis of psychological stress reduction, linking psychological improvement with objective biochemical markers.

A randomized controlled trial (RCT) published in 2024 in the journal “Integrated Traditional Chinese and Western Medicine Nursing (Chinese-English)” reported core findings (psychological and social functioning): The experimental group (empathetic nursing + ERAS) demonstrated significantly lower scores on the Beck Anxiety Inventory (BAI) and Beck Depression Inventory (BDI-II) compared to the conventional nursing group post-intervention, while simultaneously achieving significantly higher scores on the Functional Assessment of Well-being in Health (FACT-HN). This directly demonstrates the definitive efficacy of the ERAS model, which integrates humanistic care, in alleviating negative emotions and improving quality of life (covering

psychological and social functioning dimensions).

4.3 Optimization of Medical Resources

The “Perioperative Full-Chain Service Standard” implemented by Guangdong Provincial Hospital of Traditional Chinese Medicine reduced the average length of stay by 2.5 days and increased the bed turnover rate by 15% [22].

5. Existing Challenges and Optimization Paths

The contradiction between standardization and personalization. The TCM concept of “one prescription for one patient” needs further integration with the ERAS standardized pathway. For instance, the selection of acupuncture acupoints should be based on evidence-based medicine (EBM) to formulate typing protocols (e.g., constitution typing combined with pain grading) [23].

Differences in healthcare cognition exist, with some Western medical practitioners showing low acceptance of Traditional Chinese Medicine (TCM) techniques (e.g., Zi-Wu Liu-Zhu massage), necessitating enhanced interdisciplinary training. Studies indicate that combined training can improve the efficiency of TCM-Western medicine collaboration by 40% [24, 25]. In the direction of intelligent empowerment, the development of AI-based tongue/pulse analysis systems is underway, which can generate personalized care plans based on patients’ constitutions (e.g., the “digital twin technology” employed by Guangdong Provincial Hospital of Traditional Chinese Medicine) [26, 27].

6. Future Development Directions

Policy and standardization development: Promote local standards (e.g., the “Guidelines for Integrated Traditional Chinese and Western Medicine in Perioperative Rapid Rehabilitation”) to become industry norms, covering preoperative risk assessment, intraoperative technical integration, and postoperative follow-up procedures [28, 29].

Enhanced multidisciplinary collaboration: Establishing a multidisciplinary team (MDT) integrating “Traditional Chinese Medicine (TCM) -Western Medicine-Psychology-Rehabilitation”, such as combining TCM massage with Western strength training in orthopedic surgery to reduce the risk of deep vein thrombosis [29, 30].

Community-hospital collaboration: By integrating specialized cancer pain clinics with home follow-ups, perioperative care is extended beyond the hospital setting to achieve comprehensive lifecycle management [30].

7. Conclusion

The synergistic application of humanistic care and integrated traditional Chinese and Western medicine (TCM) for perioperative rapid rehabilitation not only significantly enhances patients’ physiological recovery efficiency but also reconstructs a “patient-centered” medical ecosystem through psychological support and environmental optimization. Meanwhile, the implementation of humanistic nursing

concepts in TCM-integrated perioperative rapid rehabilitation, via psychological support, personalized interventions, and environmental optimization, markedly improves both physiological and psychological recovery outcomes. Future efforts should focus on strengthening the “patient-centered” integrated medical model through multidisciplinary collaboration, technological innovation, and policy support, thereby providing reference solutions for perioperative management.

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