

IMPACT OF FAST-TRACK PROTOCOLS ON FUNCTIONAL RECOVERY AND QUALITY OF LIFE IN TUMORS OF THE FEMALE REPRODUCTIVE SYSTEM

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Abstract

Objective. To evaluate the impact of Fast-track (ERAS) protocols on functional recovery and quality-of-life outcomes in patients with tumors of the female reproductive system.

Materials and methods. The study included 103 patients with ovarian, uterine body, and cervical tumors who underwent surgical treatment. The main group consisted of 49 patients managed according to ERAS protocols, while 54 patients receiving conventional perioperative care formed the control group. Functional status was assessed using the ECOG scale, and quality of life was evaluated with the EQ-5D index. Time to independent mobilization and recovery of self-care ability were also analyzed.

Results. In the ERAS group, transition to ECOG 0–1 occurred after 3.9 ± 1.0 days, and independent mobilization was achieved after 2.0 ± 0.6 days. The EQ-5D index reached 0.82 ± 0.05 , which was significantly higher than in the control group (0.69 ± 0.07). Functional recovery in patients receiving standard care was considerably slower.

Conclusion. Fast-track protocols accelerate functional recovery and improve quality of life in gynecologic oncology patients. Implementation of ERAS pathways enhances the effectiveness of comprehensive treatment and promotes earlier social reintegration.

Keywords: Fast-track (ERAS), gynecologic oncology, functional recovery, quality of life, ECOG, EQ-5D, early mobilization, perioperative management.

Introduction

Tumors of the female reproductive system represent one of the most common pathologies in oncogynecological practice. In evaluating treatment outcomes, increasing importance is being placed not only on survival rates but also on postoperative functional recovery and quality of life indicators [1]. Modern clinical studies consider early mobilization, the ability for self-care, and subjective well-being as key indicators of treatment effectiveness [2].

The Enhanced Recovery After Surgery (ERAS) concept provides a multidisciplinary perioperative approach that includes a комплекс of measures aimed at reducing pain, limiting metabolic stress, and preserving physiological functions [3]. Implementation of ERAS protocols has been shown to promote early patient activation and accelerate the rehabilitation process [4].



Several studies emphasize that the application of ERAS algorithms in oncogynecological patients is associated with significant improvement in quality of life indicators, reduction of fatigue syndrome, and faster recovery of ECOG functional status [5]. In particular, data obtained using indices such as EQ-5D confirm the priority of a patient-centered approach [6].

At the same time, studies evaluating the impact of Fast-track protocols on functional recovery and quality of life in the Central Asian population remain limited, highlighting the need for further research. Considering the above, investigating the influence of ERAS protocols on functional outcomes in tumors of the female reproductive system has significant scientific and practical relevance.

Materials and Methods:

The study was conducted among 103 patients who underwent surgical treatment for tumors of the female reproductive system. All patients were diagnosed with ovarian, uterine body, or cervical tumors and underwent planned surgical intervention.

The patients were divided into two groups. The main group included 49 patients who received perioperative management according to Fast-track (ERAS) protocols. The control group consisted of 54 patients treated according to the standard clinical algorithm.

In the main group, комплекс measures consistent with the ERAS concept were implemented, including preoperative patient education and motivation, avoidance of prolonged fasting, preoperative carbohydrate drinks, multimodal analgesia, restricted infusion therapy, early verticalization within 6–8 hours after surgery, initiation of nutrition within 12–24 hours, respiratory exercises, thromboprophylaxis, and early physiotherapy.

In the control group, patients were managed according to the conventional scheme, including delayed mobilization and delayed initiation of enteral nutrition.

Functional recovery was assessed using the ECOG scale, while quality of life was evaluated with the EQ-5D index. Additionally, time to independent ambulation and self-care ability were analyzed. The obtained data were statistically processed and presented as $M \pm m$ values.

Table 1 Functional Status and Quality of Life Indicators in the Main and Control Groups

Indicator	Main Group (n=49)	Control Group (n=54)
Transition to ECOG 0–1 status, days	3.9 ± 1.0	6.4 ± 1.3
Independent ambulation, days	2.0 ± 0.6	4.1 ± 0.9
Self-care ability, days	2.8 ± 0.7	5.0 ± 1.1
EQ-5D index	0.82 ± 0.05	0.69 ± 0.07



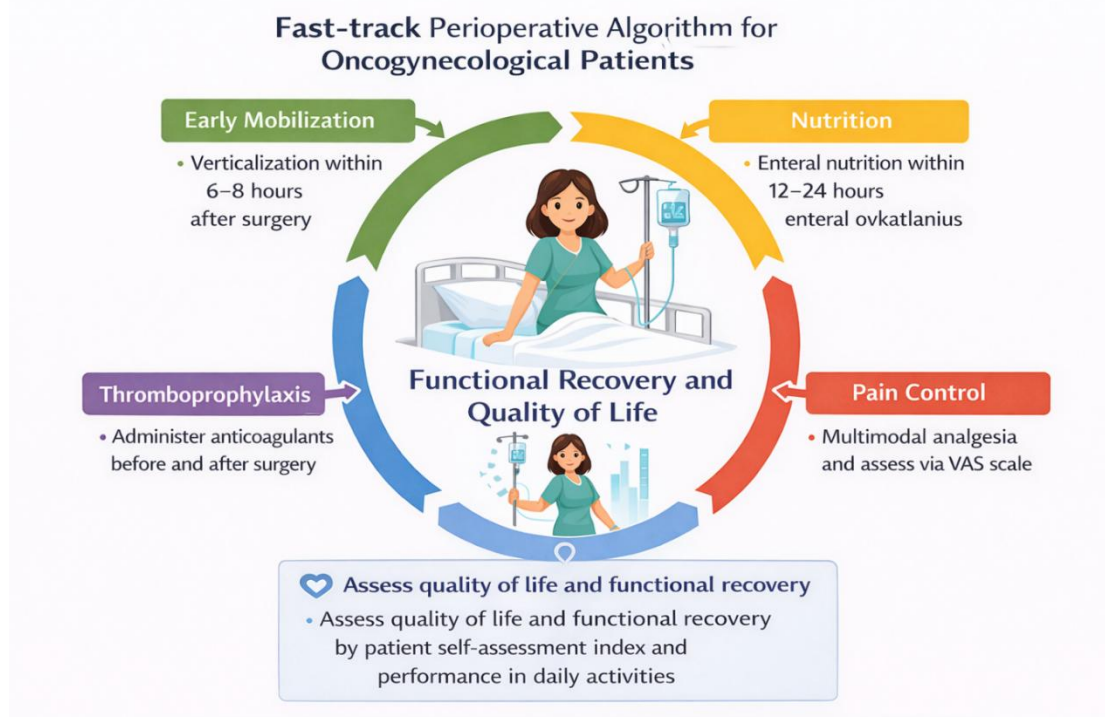


Figure 2. Circular diagram illustrating the impact of Fast-track protocols on functional recovery and quality of life

Results:

In patients of the main group where Fast-track protocols were implemented, postoperative functional recovery indicators were significantly better compared to the control group. According to the ECOG functional status scale, transition to grade 0–1 was observed on average at 3.9±1.0 days in the main group, whereas in the control group this indicator was 6.4±1.3 days.

Independent ambulation in the main group was achieved at an average of 2.0±0.6 days, while in patients managed with standard perioperative care this показатель was 4.1±0.9 days. The ability for self-care was restored within 2.8±0.7 days in the Fast-track group, compared to 5.0±1.1 days in the control group.

Assessment of quality of life using the EQ-5D index demonstrated that the main group reached a value of 0.82±0.05, which was significantly higher than 0.69±0.07 observed in the control group. The obtained results indicate that the Fast-track approach plays an important role in improving patients’ subjective well-being and facilitating earlier return to daily activities.

Table 2 Dynamics of Functional Recovery in the Main and Control Groups

Indicator	Main Group (n=49)	Control Group (n=54)
Transition to ECOG 0–1 status, days	3.9 ± 1.0	6.4 ± 1.3
Independent ambulation, days	2.0 ± 0.6	4.1 ± 0.9
Self-care ability, days	2.8 ± 0.7	5.0 ± 1.1
EQ-5D index	0.82 ± 0.05	0.69 ± 0



Discussion:

The obtained data demonstrate that Fast-track protocols have a positive impact on the functional recovery process in oncogynecological patients. Early mobilization, multimodal analgesia, and early initiation of nutrition contribute to the preservation of physiological functions and create favorable conditions for a faster return to daily activities.

According to the literature, the ERAS approach reduces asthenic syndrome and leads to more rapid improvement in ECOG performance status. Our study confirms this trend, as stabilization of functional status was accompanied by a significant increase in quality of life indices.

One of the important findings was the earlier restoration of self-care ability in the Fast-track group, which facilitated faster social reintegration of patients. In addition, active involvement of patients in the treatment process contributed to stabilization of their psycho-emotional state and increased subjective satisfaction.

Thus, the implementation of ERAS protocols not only improves clinical indicators but also has a positive effect on quality of life within the framework of a patient-centered approach.

Final Conclusions:

The conducted study demonstrated that the implementation of Fast-track (ERAS) protocols in patients with tumors of the female reproductive system significantly accelerates postoperative functional recovery and improves quality of life indicators. In the main group, earlier stabilization of ECOG functional status, as well as reduced time to independent ambulation and self-care, were observed.

The increase in the EQ-5D index confirmed an improvement in patients' subjective well-being. The Fast-track approach facilitated early rehabilitation and created favorable conditions for timely transition to subsequent stages of specialized treatment.

Thus, ERAS protocols contribute to the optimization of functional outcomes and enhancement of quality of life in oncogynecological patients, and their wider implementation into clinical practice is considered appropriate and justified.

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