

DETERMINATION OF THE QUALITY OF LIFE AFTER UTERINE EXTIRPATION USING MULTIMODAL ANALGESIA

Abbas K. R.

Tutors: senior lecturer A.A. Shmatava, assistant D.V. Shabratko

Belarusian State Medical University, Minsk

Resume. The basis of the "Fast Track Surgery" concept is a combination of anesthesia in the first hours of the postoperative period, regardless of the type of surgical intervention, including cesarean section. To evaluate the effectiveness of this concept, a prospective, randomized, controlled trial was conducted with the participation of 30 patients who underwent laparoscopically assisted vaginal uterine extirpation (LAVUE) under multicomponent anesthesia using a TAB block. The use of multimodal anesthesia in the postoperative period after LAVUE ensured a stable state of hemodynamics, reduced the need for narcotic and nonsteroidal anti-inflammatory drugs, accelerating the activation of patients and positively affecting their quality of life.

Keywords: extirpation of the uterus, multimodal anesthesia, quality of life.

Relevance. Uterine fibroids (UF) are the most common type of tumor found in women at any age. The frequency of occurrence ranges from 60% to 80% [1-3].

UF affects the quality of life of patients and their social activity. UF can lead to bleeding, urinary disorders, and compartment syndrome [4, 5].

Laparoscopic extirpation of the uterus is currently considered the optimal surgical treatment for uterine fibroids. This minimally invasive method, combined with the use of an accelerated postoperative rehabilitation protocol such as Enhanced Recovery after Surgery (ERAS), provides faster recovery compared to traditional open surgery [6, 7].

ERAS protocols mainly consist of components such as minimally invasive surgical procedures. This minimally invasive method preserves the uterus, early activation, and multimodal anesthesia of the postoperative period,

which includes regional anesthesia methods [8].

Objective: to study the quality of life of patients after laparoscopic assisted vaginal hysterectomy using multimodal anesthesia, taking into account the concept of early rehabilitation "Fast Track Surgery "

Materials and methods. The study design is a prospective randomized controlled trial, which included 30 women hospitalized in the gynecological department of the City Hospital #6 of Minsk" in the period from January 01, 2025 to September 01, 2025.

The inclusion criteria were: the patient's consent to participate in the study. Surgical intervention is laparoscopically assisted vaginal extirpation of the uterus under multicomponent balanced anesthesia (MCBA) with a transversus abdominal plane block (TAP – block), n= 30.

Indications for surgery were large uterine fibroids (n=26, 86.7%) and

suspected malignant neoplasm (n=4, 13.3%).

The procedure for performing MCBA with mechanical ventilation: induction was performed by combination of inhalation of sevoflurane with intravenous administration of propofol at a dose of 2-4 mg/kg; rapid sequential induction was performed.

Muscle relaxation was provided by the administration of succinylcholine at a dose of 1– 1.5 mg/kg, followed by orotracheal intubation and transfer to a ventilator in the normoventilation mode. After tracheal intubation, the flow of fresh gas (O₂) was 4 l/min, after the extraction of the child, the flow of fresh gas decreases to 2 l/min and remains so until the end of the operation.

Maintenance of anesthesia by inhalation of sevoflurane 1.0 MAC (minimum alveolar concentration).

Before the operation the TAP - block was performed on both sides with a 26– 27G "Pencil Point" type spinal needle with lateral access under the control of an ultrasound sensor: the sensor was located at the level of the anterior or middle axillary lines, approximately in the middle of the distance between the lower edge of the XII-th rib and the crest of the ilium, while the Th X–XII nerves were blocked. A combination of hypertonic bupivocaine solution bupivocaine 0.5%– 10ml in combination with dexamethasone 4mg was used for the blockade.

Stages of research: Stage I – after surgery (in the postoperative ward), Stage II – 3 hours after surgery, stage III – 6 hours after surgery, stage IV - 9 hours after surgery, stage V - 12 hours

after surgery, Stage VI – 24 hours after surgery.

The object of the study was hemodynamic parameters (systolic, diastolic, mean blood pressure, heart rate).

To assess satisfaction with anesthesia, the EuroQol 5– Dementia Health Questionnaire (EQ– 5D) was used, which consists of two parts: the first part will include questions characterizing the quality of life (QOL) – mobility, self-care, daily activity, pain /discomfort and anxiety /depression, the second – a visual-analog scale (YOURS). The questionnaire was filled out twice: upon admission to the hospital and upon discharge.

The patients were randomized according to the main demographic indicators. (age, gender, underlying/comorbid pathology), $p>0.05$, using a simple randomized method based on computer generation of randomized numbers.

The data obtained were processed by methods of variational statistics on a personal computer using the STATISTICA v application software package. 10.0. To compare parametric (quantitatively normally distributed features) in the observation groups, the Student's t-test was used; when comparing nonparametric indicators, the Kruskal–Wallis criterion was used.

Results and discussion. The average age was 59.5 ± 6.3 years. The duration of the operation was 111.3 [97.3; 146.8] minutes, blood loss was 423.7 [257.1; 642.5] ml. The duration of hospital stay was 5.3 [4.8; 8.2] days.

Hemodynamics at all stages of surgery was within the age norm, Extubation was performed immediately after

surgery without complications, and the VAS pain level was 4.6 [2.3; 6.4]. The use of narcotic analgesics required 8 patients (26.7%). According to the results of the EQ-5D questionnaire, upon admission to the hospital, the most patients had violations in the sections "Anxiety/depression" (43.3%, n=13) and "Pain/discomfort" (16.7%, n=5), problems were identified in the remaining sections of the questionnaire from 3.3%, n=1 ("Self-care") up to 13.3%, n=4 ("Daily activity") patients.

Upon discharge, the proportion of patients experiencing psychological problems decreased significantly (16.7% versus 43.3%), while in other sections the proportion of patients with impaired functioning increased: 2-fold for the Pain/Discomfort section, 5-fold for the Mobility section, and 4-fold for the Daily Activity section, 20 times – for the "Self-care" section. The sections for which the largest number of patients with impaired functioning was identified were "Pain/discomfort" (20%, n=6), "Daily activities" (43.3%, n=13), "Mobility" (36.7%, n=11). The proportion of patients with significant impairments did not exceed 3.3% ("Daily activities"). The average EQ-5D VAS health status in the patients remained unchanged: 80.6 ± 13.8 at admission versus 79.9 ± 13.8 at discharge. In 43% of patients, the health status of EQ-5D VAS worsened (the indicator decreased), in 39% it improved.

The studied cohort was divided into two groups based on the intensity of pain syndrome on the 1st day after

surgery: Group I – 11 women whose pain level was rated as 4 points by VAS, group II – 19 women who had pain levels <4 points. Patients with pain syndrome after surgery with 4 VAS scores were 2.4 times more likely to have difficulties in daily activity ($p < 0.01$) and 2.2 times more likely to have problems in self-care upon discharge ($p < 0.05$).

According to the section "Anxiety/depression", "Mobility" and "Pain/discomfort" did not show statistically significant differences.

Activation of patients with a pain level of 4 points according to VAS was on average 7 hours longer: median 15 hours [7.0; 14.0] versus median 7 hours [5.0; 12.0], $p < 0.01$.

Most of the patients noted positive impressions of their hospital stay in all sections of the questionnaire. At the same time, two women noted that aspects of medical care that can be improved include consideration of patient preferences and continuity of care.

Conclusions:

1. The use of standardized tools, such as the EQ-5D questionnaire, made it possible to assess not only the state of physical health, but also its impact on the social and emotional well-being of patients after uterine extirpation.

2. The use of a multimodal approach to anesthesia in the postoperative period in combination with innovative methods of preventive anesthesia (TAP-block) promotes early activation of patients, reduces the need for the use of painkillers, which leads to an improvement in the quality of life.

Literature

1. Jenkinson, C. The Picker Patient Experience Questionnaire: development and validation using data from in-patient surveys in five countries. / C. Jenkinson // *Int J Qual Health Care* – 2002.

– №14. – V.5 – P.353– 8.

2. Cherkasov, M.A. Russian version of the Picker Patient Experience Questionnaire: cross-cultural adaptation. / M.A. Cherkasov et al. // International Journal of Applied and Fundamental Research. – 2018. – V.3. – P.91– 95.

3. Spies, J.B. The UFS– QOL, a new disease– specific symptom and health– related quality of life questionnaire for leiomyomata. / J.B. Spies et al.// Obstet Gynecol. – 2002. – №99. – V.2. – P.290– 300.

4. Rodriguez– Triana, V.M. Quality of Life after Laparoscopic and Open Abdominal Myomectomy. / V.M. Rodriguez– Triana et al. //J Minim Invasive Gynecol. – 2021. – №;28. – V.4. – P.817– 823.

5. Tsuzuki Y, Tsuzuki S, Wada S, Fukushi Y, Fujino T. Recovery of quality of life after laparoscopic myomectomy. J Obstet Gynaecol Res. 2019 Jan;45(1):176– 181.

6. Недашковский, Э.В. Использование визуально– аналоговой шкалы при оценке выраженности болевого синдрома после кесарева сечения в зависимости от метода обезболивания. / Недашковский Э.В., Седых С.В., Закурдаев Е.И.// Анестезиология и реаниматология. – 2016.– №61. – Т.5.– с.372– 376.

7. Johns, N. Clinical effectiveness of Transversus Abdominis Plane (TAP) block in abdominal surgery: a systematic review and meta– analysis/ N. Johns et al. // Colorectal Dis. – 2012. – №14. – V.10. – P.635–642.

8. Benetazzo, L. 3D reconstruction of the crural and thoracolumbar fasciae. / L. Benetazzo et al.// Surg Radiol Anat. – 2011. – V. 33. – P.855–862.

ОПРЕДЕЛЕНИЕ КАЧЕСТВА ЖИЗНИ ПОСЛЕ ЭКСТИРПАЦИИ МАТКИ ПРИ ИСПОЛЬЗОВАНИИ МУЛЬТОМОДАЛЬНОЙ АНАЛГЕЗИИ

Аббас К. Р.

*Научные руководители: ст. преп. А.А. Шматова, ассистент Д.В Шабратко
Белорусский государственный медицинский университет, г. Минск*

Резюме. Основой концепции «Fast Track Surgery» является комбинация обезболивания в первые часы послеоперационного периода, независимо от вида хирургического вмешательства, включая кесарево сечение. Для оценки эффективности данной концепции было проведено проспективное, рандомизированное, контролируемое исследование с участием 30 пациенток, которым была выполнена лапароскопически ассистированная влагалищная экстирпация матки (ЛАВЭМ) в условиях многокомпонентной анестезии с использованием ТАБ-блока. Применение мультимодального обезболивания в послеоперационном периоде после ЛАВЭМ обеспечивал стабильное состояние гемодинамики, снижал потребность от наркотических и нестероидных противовоспалительных средств, ускоряя активизацию пациенток и положительно влияет на их качество жизни.

Ключевые слова: экстирпация матки, мультимодальное обезболивание, качество жизни.