

INFLUENCE OF EPIDURAL ANESTHESIA ON THE QUALITY OF THE PERIOPERATIVE PERIOD IN PATIENTS UNDERGOING TOTAL ABDOMINAL HYSTERECTOMY

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INFLUENCE OF EPIDURAL ANESTHESIA ON THE QUALITY OF THE PERIOPERATIVE PERIOD IN PATIENTS UNDERGOING TOTAL ABDOMINAL HYSTERECTOMY

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Introduction. Many pathological conditions lead to the fact that women need a total abdominal hysterectomy. Therefore, improving the quality of the peri- and postoperative period in such patients is quite important for the positive effect of the treatment.

Purpose – to study the effect of epidural analgesia with standard doses of local anesthetics on the quality of the peri- and postoperative period in women undergoing total abdominal hysterectomy.

Materials and methods. The results of surgical treatment of 54 women who underwent total abdominal hysterectomy were studied. Patients were divided into 2 groups, depending on the type of anesthesia.

The quality of the peri- and postoperative period was assessed by objective (changes in laboratory parameters, doses of anesthetics and analgesics) and subjective (VAS) indicators.

The results. Comparing the groups, the following results were obtained: Leukocytes after surgery [16.79 ± 0.93] for 1st group versus [13.65 ± 0.62] for the second group, which is statistically significantly less in the 2nd group $p=0.006$; on the next day [12.79 ± 0.66]; [11.0 ± 0.44] statistically significantly less in the 2nd group $p=0.026$; after 3 days [9.75 ± 0.46]; [8.59 ± 0.26], $p=0.035$ – also a significant decrease.

The dose of narcotic analgesic according to the Mann-Whitney test does not statistically differ in the two groups ($p=0.135$), while the dose of inhalation anesthetic is smaller in group 2 ($p=0.009$). VAS after awakening [3.9 ± 0.2]; [1.4 ± 0.3] smaller in group 2 $p=0.0001$; after 3 hours [4.0 ± 0.2]; [2.9 ± 0.3] smaller in group 2 $p=0.01$; after 6 hours [3.6 ± 0.2]; [3.0 ± 0.2] smaller in group 2 $p=0.039$; after 9 hours [3.3 ± 0.1]; [2.6 ± 0.2] smaller in group 2 $p=0.001$; after 12 hours [2.8 ± 0.1]; [2.4 ± 0.1] is smaller in the 2nd group $p=0.049$.

Conclusion. The inclusion of epidural anesthesia as a component of combined anesthesia with inhalation in total abdominal hysterectomy allows to reduce the dose of sevoflurane during anesthesia, and also significantly improves the quality

of the postoperative period, especially on the first day. Epidural analgesia promotes accelerated rehabilitation of patients.

Key words: hysterectomy, epidural analgesia, pain, analgesia.

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ВПЛИВ ЕПІДУРАЛЬНОЇ АНЕСТЕЗІЇ НА ПЕРЕБІГ ПЕРІОПЕРАЦІЙНОГО ПЕРІОДУ У ПАЦІЄНТОК ПРИ ТОТАЛЬНІЙ АБДОМІНАЛЬНІЙ ГІСТЕРЕКТОМІЇ

Осадча В.В.¹, Кобеляцький Ю.Ю.²

Вступ. Дуже багато патологічних станів призводять до того, що жінкам необхідне виконання тотальної абдомінальної гістеректомії. Тому покращення якості пери- та післяопераційного періоду у таких пацієнток є неабияк важливим для позитивного ефекту від проведеного лікування.

Мета – вивчити вплив епідурального знеболення стандартними дозами місцевих анестетиків на якість пери- та післяопераційного періоду у жінок, котрим проводиться тотальна абдомінальна гістеректомія.

Метеріали та методи. Досліджені результати хірургічного лікування 54 жінок, які перенесли тотальну абдомінальну гістеректомію. Пацієнтки були розподілені на 2 групи залежно від виду анестезії.

Якість пери- та післяопераційного періоду оцінювалась за об'єктивними (зміни в лабораторних показниках, дози анестетиків та анальгетиків) та суб'єктивними (ВАШ) показниками.

Результати. Порівнюючи групи, отримані такі результати: лейкоцити після операції $[16.79 \pm 0.93]$ для 1 першої групи проти $[13.65 \pm 0.62]$ для другої групи, що статистично достовірно менше у 2 групі $p=0.006$; на наступну добу $[12.79 \pm 0.66]$; $[11.0 \pm 0.44]$ статистично достовірно менше у 2 групі $p=0.026$; через 3 доби $[9.75 \pm 0.46]$; $[8.59 \pm 0.26]$, $p=0.035$ – також достовірне зменшення.

Доза наркотичного анальгетика за критерієм Манна-Уїтні статистично не відрізняється у двох групах ($p=0.135$), тоді як доза інгаляційного анестетика менша у 2 групі ($p=0.009$). ВАШ після пробудження $[3.9 \pm 0.2]$; $[1.4 \pm 0.3]$ менший у 2 групі $p=0.0001$; через 3 години $[4.0 \pm 0.2]$; $[2.9 \pm 0.3]$ менший у 2 групі $p=0.01$; через 6 годин $[3.6 \pm 0.2]$; $[3.0 \pm 0.2]$ менший у 2 групі $p=0.039$; через 9 годин $[3.3 \pm 0.1]$; $[2.6 \pm 0.2]$ менший у 2 групі $p=0.001$; через 12 годин $[2.8 \pm 0.1]$; $[2.4 \pm 0.1]$ менший у 2 групі $p=0.049$.

Висновок. Включення епідуральної анестезії як компонента комбінованої анестезії з інгаляційною при тотальній абдомінальній гістеректомії дозволяє скоротити дозу севофлюрану під час анестезії, а також достовірно значно покращує якість перебігу післяопераційного періоду особливо у першу добу. Епідуральне знеболення сприяє прискореній реабілітації пацієнток.

Ключові слова: гістеректомія, епідуральна анестезія, біль, знеболення.

Many pathological conditions lead to the fact that women need to perform a total abdominal hysterectomy [1]. This is a fairly large-scale surgical intervention, which leads to a significant change in a woman's anatomy [2], and also significantly affects a woman's psychological state. Therefore, improving the quality of the peri- and postoperative period in such patients is quite important for the positive effect of the treatment performed [3, 4, 5].

Objectives – to study the effect of epidural analgesia with standard doses of local anesthetics on the quality of the peri- and postoperative period in women undergoing total abdominal hysterectomy.

Materials and methods. The results of surgical treatment of 54 women who underwent total abdominal hysterectomy in Dnipro Regional Clinical Hospital named after I.I. Mechnykov of the Dnipropetrovsk Regional Council. The patients were divided into 2 groups as follows:

1) Patients who received anesthesia in the amount of inhalation anesthesia with sevoflurane, with standard doses of opioids, relaxation with standard bolus doses of atracurium – 25 women, average age 53.1 ± 1.8 years, weight – 78.3 ± 2.6 kg, average operation duration – 111.0 ± 3.4 min.

2) Patients who received anesthetic support in the amount of ETN+EPA inhalation anesthesia with sevoflurane with prior placement of an epidural catheter and administration of epidural bupivacaine 0.25% – 10.0. The dose of opioids was determined intraoperatively, according to the patient's needs, taking into account hemodynamic and stress markers. Relaxation with standard bolus doses of atracurium. – 29 women, average age 51.1 ± 1.8 years, weight – 75.7 ± 3.1 kg, average operation duration – 101.3 ± 5.2 min.

When comparing the data, no statistically significant differences between the groups were found, which allows them to be objectively compared.

The quality of the peri- and postoperative period was assessed by the following indicators:

– laboratory: leukocyte count after surgery, the next day, 3 days later; cortisol after surgery, the next day, after 3 days; procalcitonin after surgery, the next day, after 3 days; C-reactive protein after surgery, the next day, after 3 days – as markers of inflammation;

– dose of narcotic analgesic, dose of inhalation anesthetic, need for postoperative intravenous morphine administration, postoperative vomiting and nausea

– subjective: VAS after 3, 6, 9, 12, 16, 24 and 48 hours, time of first need for analgesia

Results. Comparing the groups, the following results were obtained: leukocytes after surgery [16.79 ± 0.93] for the first group 1 versus [13.65 ± 0.62] for the second group, which is statistically significantly less in the 2nd group $p=0.006$; on the next day [12.79 ± 0.66]; [11.0 ± 0.44] statistically significantly less in the 2nd group $p=0.026$; after 3 days [9.75 ± 0.46]; [8.59 ± 0.26], $p=0.035$ – also a significant decrease.

Comparing the indicators of cortisol, procalcitonin and C-reactive protein, no statistically significant changes were found in the two groups.

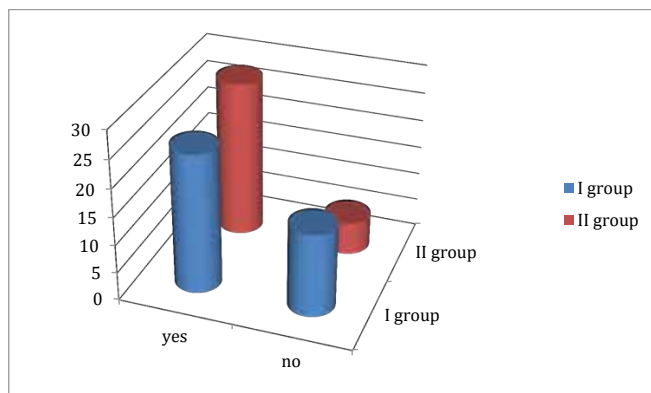
The dose of narcotic analgesic according to the Mann-Whitney criterion does not statistically differ in the two groups ($p=0.135$), while the dose of inhalation anesthetic is smaller in group 2 ($p=0.009$).

Patients from first group needed intravenous morphine in 56% of cases, while patients of the 1st group – 21.4%, which gives a statistically significant difference ($p=0.004$) OR 2.6 (Pic. 1).

Postoperative vomiting in 56% – 1 group, 35.7% – 2 group, the difference is not statistically significant ($p=0.14$).

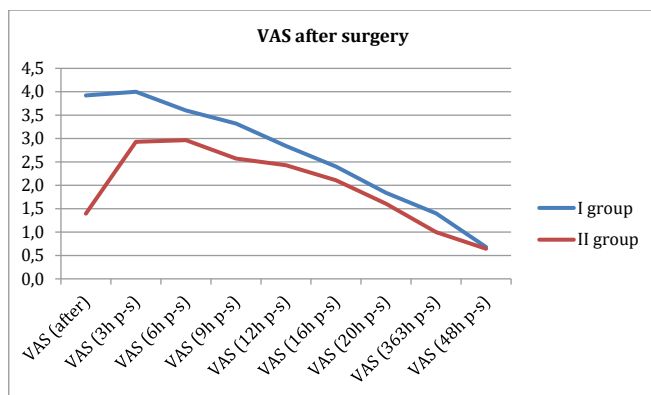
Postoperative tremors were noted in 56% of patients in group 1, and in 21.4% of patients in group 2 – a statistically significant difference ($p=0.001$) OR 2.6.

VAS after awakening [3.9 ± 0.2]; [1.4 ± 0.3] smaller in group 2 $p=0.0001$; after 3 hours [4.0 ± 0.2]; [2.9 ± 0.3] smaller in group 2 $p=0.01$; after 6 hours [3.6 ± 0.2]; [3.0 ± 0.2] smaller



Pic. 1

in group 2 $p=0.039$; after 9 hours $[3.3\pm 0.1]$; $[2.6\pm 0.2]$ smaller in group 2 $p=0.001$; after 12 hours $[2.8\pm 0.1]$; $[2.4\pm 0.1]$ is smaller in group 2 $p=0.049$. After that, in the following hours, there is no statistically significant difference (Pic. 2).



Pic. 2

The time of the first need for analgesia in group 1 was 1.8 ± 0.2 hours, while in group 2 it was 2.8 ± 0.2 hours, which is reliably $p=0.0001$.

Conclusion. Including epidural anesthesia as a part of combined anaesthesia with inhalation anesthetics in patients who underwent total abdominal hysterectomy allows to reduce dose of sevoflurane and significantly improves the quality of the postoperative period, especially on the first day (pain according to VAS lower, the time of the first analgesia is longer; the need for intravenous morphine is lower; tremor is less common); therefore, epidural leads to shorter recovery time, to better compliance between the patient and the doctor.

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