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Optimization Of Anesthetic Management For Gynecological Operations

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In recent years, in the Department of gynecology, often performed extirpation of the uterus. This is due to the fact that drug therapy does not give the desired effect. Only according to the multidisciplinary clinic of SamMU only in 2022, constituent part of extirpation of the all 150 laparotomic operations, uterine fibroids accounts about for 56.2%.
Purpose: was to study the effectiveness and safety of the method of anesthesia.
Method: was to carry out various types of anesthetic support for identical operations and determine the most
effective method of anesthesia.
As a result: all methods of anesthesiological support had an effective level of anesthesia. There was no special differentiation between different methods.

Introduction. The most commonly performed method of surgical intervention in gynecology is hysterectomy (hysterectomy) [1]. This is due to the fact that despite drug therapy, the leading method of treating uterine fibroids today remains surgery [2]. In Russia frequency hysterectomies for uterine fibroids account for 40-42% of the total number of hysterectomies performed for other diseases [4].
According to the multidisciplinary clinic of Samarkand State Medical University for 2022 alone, out of all 228 laparotomy operations, extirpation for uterine fibroids accounts for 56.2%. Effective and safe pain relief is one of the most important tasks during surgical interventions, both to ensure adequate analgesia and to prevent the development of possible complications.
Both with low provision and with increased analgesia, prolonged immobilization of the patient can be observed and, accordingly, lead to an increased risk of complications, incidence of cardiopulmonary and thromboembolic complications [1].
The choice of tactics, dosage and method of pain relief depends entirely on the individual case, and this question arises before the anesthesiologist. General anesthesia is the most popular, but in recent years, techniques of central neuraxial blocks (CNB): spinal, epidural and combined spinal-epidural blockades [3]. The “gold standard” for pain relief during abdominal surgery is neuraxial anesthesia methods [4].
Main advantages of CNB:
1.When successfully performed, regional anesthesia has very good analgesic properties. In the postoperative period, patients respond better than those who underwent TVA.
2. In the postoperative period, the need to administer a narcotic analgesic
occurs at a later date, which significantly reduces the need for extradoses of opioids (“resquedose”). This reduces the likelihood of side effects
narcotic drugs.
3. The length of stay of patients in the recovery room is reduced,
length of hospital stay [2].
Among CNB techniques, at the turn of the 21st century, the technique of combining SA and EA in the form of combined spinal-epidural anesthesia (CSEA) began to gain popularity [1].
CSEA is a relatively new technique for regional anesthesia, expanding the arsenal of anesthesiologists and avoiding a long latency period. The method allows you to combine the advantages of both methods and to some extent offset their disadvantages, primarily by reducing the dose of intrathecally administered anesthetic [2].

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Purpose of the study: To study the effectiveness and safety of the method of intraoperative anesthesia, with various variations of anesthesia.

Tasks:

1. Identification of the proportion of patients with inadequate intraoperative effectiveness and safety under various types of anesthesia.
2. Determine the optimal dosages of analgesics used and the timing of mobilization of patients in groups with different types of anesthesia.

Materials and methods: The study was conducted at the Department of Anesthesiology and intensive care unit of the multidisciplinary clinic of Samarkand Medical University, the study included 61 patients aged 20 to 65 years.

The groups were comparable by gender, age, and comorbidity.

The functional state of the patients corresponded to class 2 ASA-50; 3rd class - 11 patients.

The exclusion criteria were:

• patients' age is less than 18, over 65 years;
• presence of cognitive impairment, dementia, delirium;
• history of alcohol and drug abuse;
• presence of a language barrier;
• refusal of the patient to participate in the study.

The patients were divided into 3 groups:

Group I (n=16) - total intravenous anesthesia under conditions of traditional endotracheal oxygen supply (ETO),

Group II (n=25) – spinal anesthesia (SA) technique,

Group III (n= 10) – under conditions of combined combined spinal-epidural anesthesia (CSEA).

The groups were comparable by gender, age, and comorbidity.

All patients received standard premedication with intramuscular atropine 0.1%-1.0 ml + diphenhydramine 1%-1.0 ml + omnoponi 2%-1.0 ml 30-40 minutes before anesthesia.

For sedation, in some cases Sibazoni 10–20 mg was used.

Depending on the type of anesthesia performed, all patients included in the study were divided into 3 groups:

Group I (n=16) total intravenous anesthesia under conditions of traditional endotracheal oxygen supply (ETO). In patients of this group, total intravenous anesthesia was used with mechanical ventilation based on propofol 1.5–4.5 8 mg/kg/h, ketamine 7-8 mg/kg/h in combination with fentanyl 5-8 mg/kg/h, Arduani 0, 04-0.06 mg/kg/h.

Group II (n=25) after spinal anesthesia (SA).

In the second group, patients in the operating room underwent puncture of the subarachnoid space at the L3-4 level with needles of 24-25 G caliber, patients were positioned sitting or on their side. 12.5-15 mg of 0.5% hyperbaric solution of Longocaine-Heavy was injected into the subarachnoid space and after removing the needle the patient was turned on his back. Sensory-motor block occurred within 5-8 minutes.

For sedation, sodium hydroxybutyrate 50 mg/kg was administered.

Group III (n= 10) - under conditions of combined combined spinal-epidural anesthesia, it was performed by intrathecal administration of 12-15 mg of 0.5% hyperbaric solution of Longocaine-Heavy, followed by the introduction of an epidural catheter.

CSEA was performed using the “needle through needle” type using a spinal-epidural anesthesia kit manufactured by Portex, with needles having a lock.

To begin with, a puncture was carried out using a Tuohy 18G needle and the epidural space was determined using the “loss of resistance” method, after which a spinal “pencil point” needle with a caliber of 27G was passed into the hole of the Tuohy needle until the dura mater was punctured and secured with a special lock. After intrathecal administration of 2.4±0.25 ml of 0.5% hyperbaric solution of Longocaine-Heavy, catheterization of the epidural space was performed. The needle is removed and the catheter is advanced through the Tuohy needle in the cranial direction (catheter

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advancement was absolutely free). An aspiration test is performed. In this case, the "test dose" is uninformative (the clinical picture of SA develops immediately). An aseptic dressing is applied and the patient is positioned on the operating table: sagittal plane: tilted to the left by 15 degrees.
The frontal plane is horizontal. The head is raised 15-20 degrees.
Anesthetics and analgesics were used in recommended doses, taking into account anthropometric data and duration of surgery.

Results and discussion:

In group I (TBA), a rise to a pathological level was observed in 6.25% of cases.
In group II (SMA) up to 8%.
In group III (CSEA), no rise was observed.
In group I (TBA), the average score = 1.9375.
In group II (SMA), the average score = 1.92.
In group III (CSEA), the average score = 1.9.
But as is clearly shown in the graph, on average, all methods of anesthesia provided an effective level of anesthesia. There was no particular differentiation between the various techniques.
The initial (preoperative) blood pressure level was taken as 100%. Next, the following changes in indicators were recorded:
In patients of group I (TBA), the dynamics of blood pressure did not exceed 15%, but arterial hypertension was more often observed, which required the use of various pharmacological adjustments. In particular, drugs from the ganglion blocking series were used.
In patients of group II (SA), the dynamics of blood pressure did not exceed 11% and in all cases hypotension was observed intraoperatively, which was easily compensated by intravenous administration of crystalloids.
In patients of group III (CSEA), the dynamics of blood pressure did not exceed 8% and in all cases hypotension was observed intraoperatively, which was also easily compensated by intravenous administration of crystalloids.
Heart rate and SpO2 were not significantly different in patients of both groups.
Conclusion: During gynecological operations, all methods of anesthesia provided an effective level of anesthesia. But the CSEA technique had the best indicator, which ensures a smooth course of anesthesia and reliably protects the patient's body from surgical aggression. Moreover, this method has more stable hemodynamics compared to the other two groups (TVA and SA), which has a beneficial effect on the course of the operation.
In the postoperative period, a number of patients in group 1 had a feeling of discomfort and moderate pain, while patients in groups 2 and 3 did not complain of pain or discomfort.
The results obtained suggest that regional anesthesia can be fully considered as an alternative option to TVA.

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