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ORIGINAL ARTICLE

Operational and Anesthetic Risk in Concomitant Surgical and Gynecological Diseases

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ABSTRACT

This article analyzes results of surgical treatment in 123 patients with concomitant surgical and gynecological diseases, reliant on the anesthetic and operational risks. In early postoperative period, complications arose in patients groups with a significant and high degree of operational and anesthetic risks. Descriptions of risk categories classification allow characterizing the degree of anesthesia risk in surgery. Our study aims to analyze the results of simultaneous surgery for combined diseases of the abdominal cavity and small pelvis, depending on the operational and anesthetic risk. patients underwent a general clinical examination, anamnesis was carefully collected, and a plan for additional examinations was formed, including specialists involvement. Research results showed that at a point that combined operations are controverted with a high degree of anesthetic and operational risk in concurrent operations, these subjects should be scheduled to operate in different stages.

Keywords: simultaneous operations, operational and anesthetic risk, surgery

INTRODUCTION

Combined operations are among the extensive and complex surgical interventions that have become possible thanks to modern advances in surgery and anesthesiology [1-4]. According to many authors, the proportion of patients with two or three surgical diseases is 20-30%, with an upward trend [2, 5, 6]. If concerning the causes of concomitant diseases occurrence, studies are carried out quite widely, then, as for surgical treatment, performing simultaneous operations these studies are few and, most importantly, contradictory [7]. In the surgical treatment of concomitant surgical diseases, the question arises: to divide the surgical intervention into two stages or to perform simultaneous surgical correction of the existing concomitant pathology and when to do one way or another [8, 9]. Extremely low number of simultaneous interventions performed, which does not correspond to the real needs for them, is elucidated due to some reasons: inadequate intraoperative revision of the small pelvis and abdominal cavity, in preoperative period an incomplete patients examination, the affinity of surgeons to perform multistage surgical treatment of associated diseases, embellishment of the operational risk in measuring the simultaneous operations, psychological and technical unreadiness of gynecologists, anesthesiologists and surgeons to increase the scope of surgical intervention [3, 10, 11]. In our previous work, surgical treatment of patients with small pelvic organs surgical and gynecological diseases was described [12].

Detailed preoperative examination. made it possible to determine in advance the number of operational benefits and to form an operating team following this principle. Also, due to the need to plan the surgical intervention and its volume, the patients consulted with a gynecologist, and to determine the operational risk, they were examined by an anesthesiologist. An important surgical intervention stage in patients with emergency concomitant pathology is operational access, which is associated with the volume and sequence of operation, as well as the correct selection of patients when performing simultaneous operations, considering operational and anesthetic risks. The problem of risk complications postoperatively and methods of their objective assessment remains as one of unsolved problems in daily surgery practice [5, 10, 13]. At present, the incidence of complications after combined operations remains very high and in most cases, mortality is caused precisely by the postoperative complications that have arisen; therefore, it is understandable that surgeons try to some extent to anticipate these complications and try to prevent them [6, 14-16].

In a situation of operational risk, the problem of objectifying its assessment arises, since doctors perceive risk parameters differently. Often the necessary assessment of the magnitude of the risk is given at the level of opinion, and it is, as you know, the most common form of unproven judgment, although, of course, the opinion is not just a game of imagination: it is compiled with knowledge of certain specific features, which are taken into account before the operation [5]. The search for methods for streamlining the principles of assessing operational and postoperative risk has been undertaken earlier and continues at present [5, 13]. By operational risk, we mean the degree of a perceived danger that the patient is exposed to during surgery and anesthesia.

Knowing that there are great difficulties in surgical treatment of concomitant diseases, and there are insurmountable contradictions between two or three pathologies that are incomparable in the clinic and the nature of pathologies to develop an assessment of the risk of complications and mortality in this area, it is difficult to develop uniform indicators for the prognosis of complications.

In this regard, we used the classification adopted and recommended for practical use by the Moscow Scientific Society of Anesthesiologists and Resuscitators (1989), which provides for a quantitative (in points) assessment of the operational and anesthetic risk in three main categories (Table 1): 1) The general condition of the patient; 2) The volume and nature of the surgical operation; 3) The nature of the anesthesia.

This classification allows a more complete and objective than all existing ones to characterize the degree of risk of anesthesia and surgery, taking into account both the physical status and the complexity of the operation, and anesthetic benefits. This classification has been modified by us. We have modified the nature and volume of the operation. It is known that, according to the generally accepted classification, appendectomy, cholecystectomy and hernia repair are minor surgical interventions that can be attributed to low risk.

Our study aims to analyze the results of simultaneous surgery for combined diseases of the abdominal cavity and small pelvis, depending on the operational and anesthetic risk.

Risk points werer assessed as following:

I degree (minor) 1.5 points;
II degree (moderate) 2-3 points;
III degree (significant) from 3.5 to 5 points;
IV degree (high) from 5.5 to 8 points;
V degree (extremely high) from 8.5 to 11 points.

Table 1: Classification of anesthetic-anesthetic risk of the Moscow Scientific Society of Anesthesiologists and Resuscitators.

Description of risk categories	Points
I. Assessment of patients general condition	
Satisfactory: somatically healthy patients with localized surgical diseases without systemic disorders and concomitant diseases	0.5
Moderate severity: patients with mild to moderate systemic disorders associated or not associated with the underlying surgical disease	1
Severe: patients with severe systemic disorders that are caused or not caused by a surgical disease	2
Extremely severe: patients with extremely severe systemic disorders that are associated or not associated with surgical disease and pose a threat to the patient's life without surgery and during surgery	4
Terminal: patients in a terminal condition with pronounced symptoms of decompensation of vital organs and systems function, in which death can be expected during surgery or in the next few hours without it	6
II. Assessment of operation volume and nature	
Small abdominal or small surface surgeries	0.5
Large abdominal surgeries	1
III. Assessment of anesthesia nature	
Various types of local potentiated anesthesia	0.5
Regional, epidural, spinal, intravenous, or inhalation anesthesia with spontaneous breathing or with short-term auxiliary ventilation through the mask of the anesthesia machine	1
Common standard options for combined endotracheal anesthesia using inhaled, non-inhalation, or non-pharmacological anesthetics	1.5
Combined endotracheal anesthesia using inhalation, non-inhalation anesthetics and their combinations with methods of regional anesthesia, as well as special methods of anesthesia and corrective intensive therapy (artificial hypothermia, infusion-transfusion therapy, controlled hypotension, auxiliary circulation, electrocardiostimulation, etc.)	2
Combined endotracheal anesthesia using inhalation and non-inhalation anesthetics in conditions of artificial circulation, hyperbaric oxygenation, etc. with the combined use of special methods of anesthesia, intensive therapy and resuscitation	2.5

METHODS AND MATERIALS

We observed totally 123 patients having combined gynecological and surgical diseases. Total 123 women were involved in main group who go through concurrent operations, 223 patients were present in control group who go through isolated surgical involvements on the pelvic and abdominal organs. At the age of 21 to 30 y, 18 subjects (14.6%) were observed, from 31 to 40 years old were 29 (23.6%), and a larger group consisted of persons aged 41 to 50 years were 42 (34.2 %) of patients. Subjects aged 51 to 60 years were 32 (26.0%), and over 60 years old were 2 (1.6%) patients, 14 patients (11.4%) had concomitant diseases. Diseases of the cardiovascular system and respiratory organs (hypertension, atherosclerosis, ischemic heart disease, pneumosclerosis), which required careful preoperative preparation have prevailed.

Patients having cholelithiasis due to concomitant pathology of gynecology of the organs of pelvic, before surgery diagnosed, abdominal hernia with combined pathology of gyane of organs of pelvic, before surgery diagnosed, intraoperatively.

Regional anesthesia Bupivacaine Grindex Spinal solution 5 mg/ml was injected to patients spine region as shown in Figure 1 a) and b).

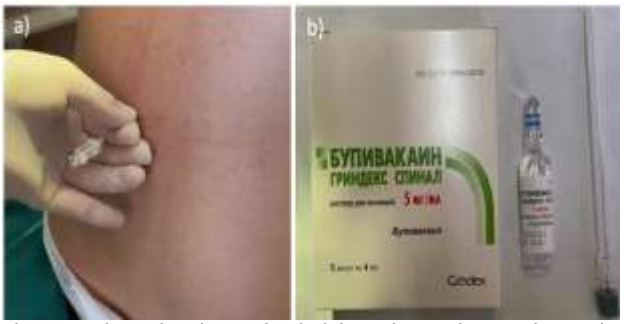

Figure 1. a) Regional anesthesia injected to patients spine region; b) Bupivacaine Grindex Spinal solution in ampula 5 mg/ml.

RESULTS AND DISCUSSION

By the nature of the combined gynecological and surgical diseases, the patients were distributed as follows (Table 2).

Table 2: Distribution of patients by disease

Pathology character	Total	
Cholecystitis plus uterine fibroids	Abs.No.	%
Cholecystitis plus ovarian cyst	26	21.12
Cholecystitis plus uterine fibroids plus ovarian cyst	07	5.73
Acute appendicitis plus uterine fibroids	08	6.51
Acute appendicitis plus uterine fibroids + ovarian cyst	07	5.73
Acute appendicitis plus ovarian apoplexy	01	0.84
Acute appendicitis plus ovarian cyst	17	13.83
Hernia plus uterine fibroids	18	14.61
Hernia plus uterine fibroids plus ovarian cyst	21	17.12
Hernia plus ovarian cyst	10	8.13
Total	08	6.56

A large group of combined diseases consisted of patients with gallbladder pathology. As can be seen from the table, 41 (33.3%) patients were operated on with gallstone disease, alongwith uterine fibroids were 26, ovarian cysts were 7, and alongwith uterine fibroids with ovarian cysts, 8 patients were operated. Acute appendicitis was operated on in 43 (35.0%) patients, in combination with uterine fibroids were 7, uterine fibroids + ovarian cyst was 1, ovarian rupture and apoplexy were 17, ovarian cyst were 18 patients.

In the control group, there were 71 (62.3%) patients with uterine fibroids, 43 (37.7%) patients with ovarian cysts. The control group was dominated by patients operated on with gallstone disease were 85 (78.0%), with acute appendicitis 13 (11.9%), with a hernia of the anterior wall of abdominal were 11 (10.1%) patients.

A comparison was made of the surgical approaches used when performing simultaneous operations. Operations in both compared groups were performed only according to the classical generally accepted methods. All patients underwent a general clinical examination, anamnesis was carefully collected, and a plan for additional examinations was formed, including specialists involvement.

In the early postoperative period, out of 123 patients operated on for combined surgical and gynecological pathologies, 10 (8.1%) there were various complications. Pneumonia developed in 2 (1.6%), partial adhesive obstruction of intestinal (0.8%), leakage of bile (0.8%) wound suppuration postoperatively 6 (4.9%) patients. There were no lethal outcomes in this group of patients. In the control group, early postoperative complications were observed in 16 (7.1%) patients.

Postoperative complications most often occur in older and elderly patients. This is largely since the largest number of combined operations were performed on persons of this particular age group, in whom, in addition to concomitant surgical diseases, changes in the cardiovascular system were observed.

As the results obtained from our studies have shown, it is quite indicative that simultaneous operations do not lead to severe surgical complications, which would be characteristic only for this type of operation. We analyzed postoperative complications depending on the degree of operational and anesthetic risk of simultaneous operations (Table 3).

Table 3: The degree of operational and anesthetic risk of simultaneous operations.

Level of risk	Patients number	
	Total number	Complications
Minor (1.5 points)	31	-
Moderate (2-3 points)	79	3
Significant (3.5 - 5 points)	11	5
High (3.5-5 points)	2	2
Total	123	10

Out of 123 patients operated on with combined gynecological and surgical pathologies, complications occurred in 10 (8.1%) all of them were linked with the main phase of the simultaneous operation. As can be seen from Table 3, postoperative complications occurred in patients with a significant and high degree of operational and anesthetic risk.

As per retrospective analysis data and the learning of prognostic indicators, we reached at a point that combined operations are controverted with a high degree of anesthetic and operational risk in concurrent operations, these subjects should be scheduled to operate in different stages.

CONCLUSION

In summary, the following conclusions were made:

1 When deciding the indication for simultaneous operations in combined diseases of the abdominal cavity and small pelvis, it is necessary to take into account the satisfactory condition of the patient and the degree of operational and anesthetic risk;
2 All complications of the surgical plan occurred due to the underlying disease;
3 Complications arose in groups of a significant and high degree of operational and anesthetic risk.

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