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Differentiated Approach to the Choice of Anesthesia Method for Cesarean Section in Pregnant Women with Myasthenia Gravis

Kramarsky VA[1]*, Kuzakov IS[2] and Yu V Trusov[3]

[1]Professor of the Department: Obstetrics and Gynecology "Irkutsk State Medical Academy of Postgraduate Education (IGMAPO), Russia

[2]Head of the Intensive Care Unit of the Irkutsk Perinatal Center, Russia

[3]Associate Professor of the Department: Obstetrics and Gynecology, IGMAPO, Russia

***Corresponding author**

Kramarskiy Vladimir Aleksandrovich, Professor of the Department: Obstetrics and Gynecology "Irkutsk State Medical Academy of Postgraduate Education (IGMAPO), Russia. Tel No: 79642257586. E-mail: kramarskye@mail.ru

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Myasthenia gravis is an autoimmune disease of the myopleural synapse, leading to the production of antibodies (Ig G) against the acetylcholine receptors of the postsynaptic membrane [1].

The clinical manifestations of the disease are muscle weakness and fatigue, the most functionally active muscles. In the population, myasthenia gravis among pregnant women occurs in 0.5% and continues to increase due to successful compensation of the disease with correct therapy and timely surgical treatment (thymectomy), if its cause is a tumor of the thymus gland (thioma), which occurs in 10% of all diseases. At the same time, the incidence of the disease among women is 2 times higher than that among men

The peak incidence of myasthenia gravis falls on the most reproductive period of a woman's life - 20 years [1,3].

The danger of the disease lies in the fact that weakness of the respiratory muscles and bulbar disorders can lead to aspiration, with the subsequent development of pulmonary complications and respiratory failure, hypoxia and hypoxemia. In addition, with the development of myasthenic crisis and prolonged mechanical ventilation and cardiovascular failure.

During pregnancy, the symptoms of myasthenia gravis may increase (40%), decrease (28%) or remain unchanged (31%), but they necessarily change after delivery [2]. Likhachev SA 20% of puerperas have an exacerbation of myasthenia gravis in the postpartum period. The constant intake of anticholesterase drugs, glucocorticoid hormones, cytostatics can not only adversely affect the development and condition of the fetus, but also cause bronchorhea, bradycardia and bronchospasm, creating significant difficulties in the selection and conduct of anesthesia.

The main problem of pregnant women with myasthenia gravis is an unpredictable reaction to succin-choline and non-depolarizing muscle relaxants.

It is known that most anesthetic drugs alter cholinesterase activity, which further aggravates neuromuscular conduction and myasthenic status. In obstetric hospitals, with operative delivery, this problem is of particular relevance, taking into account the increasing number of operative deliveries.

The anesthesiologist is always faced with the following questions: The choice of drugs for premedication without central muscle relaxant action.

When and in what dose should anticholinosterase drugs be used? The question of the method of anesthesia and the use of the main narcotic drug.

Rational management of the postoperative period with monitoring of the cardiorespiratory system and muscle tone.

The difficulty in solving a problem lies in different approaches to solving it. A number of authors attach great importance to anticholesterase therapy of patients on the day of surgery, prescribing appropriate drugs in high doses. Others, considering the patients to be partially curarized, cancel therapy before the operation, and on the day of the operation, reduce the doses of proserin or its analogs until the effect does not completely restore muscle strength.

Given the problem with muscle relaxants, intubation anesthesia with inhalation anesthetics is preferable for the anesthesiologist. However, this type of anesthesia does not exclude the development of respiratory depression, both in the mother and in the fetus. At the same time, the risk of prolonged mechanical ventilation increases with the duration of myasthenia gravis for more than 6 years [4]. If it is necessary to use muscle relaxants, it is more expedient to use atracrium or vecuronium with a dose reduction to one tenth of the standard concentration with constant neuromuscular monitoring.

In the case of a cesarean section, it is preferable to carry out regional anesthesia with the maximum restriction of sedatives and narcotic analgesics, both during the operation and in the

postoperative period. At the same time Shifman EM, Filippovich GV believe that regional anesthesia can be used only in the absence of bulbar disorders and respiratory distress.

Spinal anesthesia with minimal doses of local anesthetics makes it possible to successfully and safely solve the assigned tasks associated with the prevention of complications caused by the underlying pathology. The use of modern non-narcotic analgesics (ketanal, ketans) in the postoperative period quite fully provides anesthesia in the early postoperative period In 2010, 2 pregnant women with myasthenia gravis were delivered in the clinic of the GPTs of Irkutsk.

Pregnant K, 22 years old, was admitted for a planned operative delivery on the conclusion of a consultation with the participation of a neurologist. Diagnosis on admission: Pregnancy 39 weeks. A scar on the uterus. Generalized form of myasthenia gravis with bulbar disorders. Hypothalamic syndrome. History of myasthenia gravis for 12 years. At the age of 14, a thymectomy with prolonged mechanical ventilation (ALV) was performed after surgery for 2 days. Receives kalemin 60 mg / day. During the current pregnancy, the condition has not worsened. The previous pregnancy, at the age of 20, ended with a caesarean section under endotracheal anesthesia (ETN) in full-term pregnancy. In the postoperative period, prolonged mechanical ventilation for 4 days. Upon obtaining informed consent, the woman categorically refuses general anesthesia under ETN.

The patient's condition on admission is satisfactory. Consent was obtained for spinal anesthesia. Spinal anesthesia with marcaine in the minimum dose (15 mg) was performed. Puncture level L 2-L3, L3-L4 without the use of adjuvant therapy. There was no premedication on the eve of the operation. Anesthetic treatment was carried out without technical difficulties and complications. Hemodynamic parameters were at a stable physiological level (125/90 mm Hg) and were maintained by a volume load of 800 ml. The duration of the operation was 40 minutes.

A boy was born weighing 3460 grams. Length 50 cm with an Apgar score of 7-9 points in a satisfactory condition. There are no signs of myasthenia gravis. The total blood loss was 450 ml. In the postoperative period, analgesia was performed with ketonal. In the intensive care unit, standard monitoring of the vital functions of the body (NAD, HR, RR, SpO2, thermometry, and hourly urine output) was carried out. On the second day, the postpartum woman was transferred to the postpartum department. There were no signs of transient myasthenia gravis in the child. On the 5th day in a satisfactory condition with the child, she was discharged home under the supervision of a local gynecologist, pediatrician and neurologist.

Second case. Pregnant P, 33 years old, was admitted for a planned operative delivery with a diagnosis of Pregnancy 39 weeks. A scar on the uterus. Generalized form of myasthenia gravis with bulbar disorders. Myasthenia gravis was diagnosed 18 years ago. History of thymectomy at the age of 20 with extended mechanical ventilation. The previous labor was completed by surgery under ETN with mechanical ventilation extended for 2 days. During the entire observation period for myasthenia gravis, he received kalemin at a dose of 80 mg / day. In the process of obtaining informed consent for operative delivery, she categorically refused general anesthesia due to fear of mechanical ventilation.

The pregnant woman underwent surgical delivery under spinal anesthesia with a minimum dose of marcaine (15 mg). Anesthesia was uneventful. Hemodynamic parameters were maintained at a stable level (BP 130/80 mm Hg) by volume load in a daily volume of 1200 ml. A live full-term girl weighing 3670 grams, 52 cm long with an Apgar score of 8-9 points, without signs of myasthenia gravis was born. The total blood loss was 530 ml. On the 2nd day, the postpartum woman was transferred to the postpartum department. The newborn had no signs of myasthenia gravis. Discharged on the 5th day after delivery with a living child in a satisfactory condition.

Conclusion

Spinal anesthesia for cesarean section in pregnant women with myasthenia gravis is the method of choice. The technology used is quite safe, since it does not affect the conduction of the impulse through the Pregnant woman, an operative delivery was performed under spinal anesthesia with a minimum dose of marcaine (15 mg). Anesthesia was uneventful. Hemodynamic parameters were maintained at a stable level (BP 130/80 mm Hg) by volume load in a daily volume of 1200 ml. A live full-term girl weighing 3670 grams, 52 cm long was born with an Apgar score of 8-9 points, without signs of myasthenia gravis. The total blood loss was 530 ml. On the 2nd day, the postpartum woman was transferred to the postpartum department. The newborn had no signs of myasthenia gravis. She was discharged on the 5th day after delivery with a living child in a satisfactory condition

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