

*УДК 618.5-089.888*

*Hatamova Ugilkhon*

*Shokirova Sadokathon Mukhammatsolievna-Associate Professor*

*Department of Obstetrics and Gynecology No. 2*

*Andijan State Medical Institute*

## **INDICATIONS FOR THE USE OF VACUUM EXTRACTION DURING CHILDBIRTH AND PREVENTION OF COMPLICATIONS**

*Resume:* What future mother does not dream of giving birth easily and without complications, and the baby was born healthy! But in reality, there are different situations in childbirth that cannot be predicted in advance. Sometimes the second period of labor, which is called labor, is delayed, and the baby still can not be born. In some cases, there are signs that the child begins to suffer before being born. In such situations, surgical aids in childbirth can help, one of which is vacuum extraction of the fetus. Does this method have negative consequences for newborns? Our today's article is completely devoted to this topic.

**Keywords:** prostaglandin, amniotic fluid, premature birth.

*Хатамова Угилхон*

*Шокирова Садокатхон Мухамматсолиевна-доцент*

*Кафедра акушерства и гинекологии №2*

*Андижанский государственный медицинский институт*

## **ПОКАЗАНИЯ К ПРИМЕНЕНИЮ ВАКУУМНОЙ ЭКСТРАКЦИИ ПРИ РОДАХ И ПРОФИЛАКТИКЕ ОСЛОЖНЕНИЙ**

*Резюме:* Какая будущая мама не мечтает о том, чтобы роды прошли легко и без осложнений, а малыш родился здоровым! Но в реальности в родах случаются разные ситуации, которые заранее предугадать невозможно. Иногда второй период родов, который называется потужным, затягивается, и малыш все никак не может родиться. В ряде случаев появляются признаки того, что ребёнок начинает страдать, еще не

родившись. В таких ситуациях могут помочь оперативные пособия в родах, одним из которых является вакуум-экстракция плода. Имеет ли этот метод отрицательные последствия для новорожденных? Нашу сегодняшнюю статью мы полностью посвящаем этой теме.

**Ключевые слова:** vacuum extraction, complications, prevention.

**Introduction.** Extraction of the fetus by the head using a special vacuum apparatus is called vacuum extraction. The operation of vacuum extraction of the fetus is delivery[2].

As is known, the most common cause of perinatal morbidity and mortality is fetal oxygen deficiency during childbirth and birth trauma. According to extensive statistical data, fetal oxygen starvation and traumatic brain injury account for 50-70% of all deaths of children under one year old.

The risk of developing traumatic brain injury in intranatal fetal hypoxia is especially increased in cases of the need for obstetric delivery operations, as there is a layering of "instrumental" asphyxia on "pre-instrumental".

Vacuum fetal extraction is one of the most common delivery operations in Ukraine. The vacuum extractor is used on average in 1.3-3.6% in relation to all births in maternity hospitals in the country[4]. However, despite the widespread use of the vacuum extractor in continental Europe and Scandinavian countries, it should be noted that in most countries speaking English, it remains an unpopular operation. In the USA, there is an extremely restrained attitude to the operation of vacuum extraction of the fetus compared to obstetric forceps. This advantage was further strengthened in favor of obstetric forceps after reports of severe fetal trauma caused by the operation of vacuum extraction of the fetus appeared in the literature[3].

American obstetricians rarely use the operation of vacuum extraction of the fetus. This seems to be due to a number of reasons. Firstly, the national preference for obstetric forceps in the USA depends on the settings that are

taught in obstetrics. Secondly, some obstetricians, including domestic ones, overestimated the importance of this operation and it began to be used for extended indications, which was not always justified and in some cases led to unfavorable results, which were revealed during a comprehensive study of newborns and the analysis of long-term results[6]. Therefore, the positive reviews of many obstetricians who used this operation for the first time were replaced by a more restrained assessment of it and even to a certain extent a negative attitude towards it by some specialists due to the increase in the number of children with damage to the central nervous system after surgical delivery by this method[4].

However, to date there is no single assessment on the use of this operation, the immediate and long-term consequences of the physical and neuropsychic development of a newborn child have not been studied in detail[5]. This is all the more important because in some obstetric situations (if urgent delivery is necessary, when the moment for caesarean section is missed or there are contraindications for it, and the head is not available for applying obstetric forceps due to its high location), vacuum extraction of the fetus is the only possible operation for the birth of a live child[1]. Some authors in monographs devoted to craniotomy in modern obstetrics believe that the latter can be considered indicated if there is an immediate threat to the life of the mother in the presence of contraindications to cesarean section or other surgical interventions (imposition of obstetric forceps, classic twist, etc.).

**The purpose of the study.** Study of indications, conditions and outcomes for a woman and a newborn after vaginal operative delivery by applying a vacuum extractor of the "KIWI" system.

**Materials and methods of research.** A retrospective analysis of 495 birth histories of women delivered by vacuum extraction of the fetus for 3 years (2022-2023) was carried out. This accounted for 2.8% of all births that occurred in the perinatal center during this time.

**The results of the study.** The main indication for the operation of vacuum extraction of the fetus was acute or progressive fetal hypoxia with the fetal head located in the outlet of the pelvis and weakness of labor activity in the second period of labor. The operation of vacuum extraction of the fetus was performed according to indications from the fetus in 363 cases (73.3%), and according to indications from the mother due to weakness of the birth forces — in 132 cases (26.6%) with a gestation period of 38-41 weeks of pregnancy. In all cases, the presentation of the fetus was headache. Among the observed primiparous were 201 women (40.6%), repeat—bearing - 172 (34.7%), multi-pregnant - 122 (24.6%).

In all cases, an epi-zyotomy was performed beforehand. All newborns were extracted in 1-2 traction and there was no slipping of the cups from the fetal head. The duration of the operation was 5-7 minutes. The application of the vacuum extractor cup was performed on the fetal head located in the plane of the pelvic outlet without violating the technique of the operation in 100% of observations.

When studying the course of the postpartum and early postpartum periods, it was found that the vacuum extraction of the fetus does not affect the amount of blood loss, which is on average  $200 \pm 50$  ml. In most cases, the postpartum period proceeded without complications. The most frequent complications observed in the late postpartum period were hematometers, lochiometers, which were observed in 26 cases (5.2%), rupture of the vaginal mucosa was detected in 11 maternity women (2.2%), paravaginal hematoma - in 7 (1.4%).

Of great interest is the study of the effect of vaginal operative delivery on the condition of newborns. The Apgar score of 7-8 points was in 393 newborns (79.3%), 67 points - in 91 (18.3%), 4-5 points - in 9 (1.8%), while resuscitation assistance was required for two newborns (0.4%). The minimum body weight at birth was 2520 g, the maximum was 4200 g. The height of the children ranged from 47 to 56 cm. In 99 infants (20.3%), transient cosmetic defects were noted

("chignon" — the imprint of the vacuum extractor cup). Skin changes in the form of small abrasions, hemorrhages, cyanosis were observed in 56 cases (11.3%). In 137 infants (27.6%), cephalatomas of various localization were detected, which did not require surgical treatment. Post-daponeurotic hematoma was detected in 6 cases (1.2%). 441 newborns (89%) were discharged in satisfactory condition on 4-10 days after birth, 54 infants (10.9%) were transferred to the 2nd stage of nursing in the pediatric building of BUZOO GKPC. The main causes of progressive fetal hypoxia in childbirth were pathological changes in the umbilical cord: tight umbilical cord entwining around the neck and trunk of the fetus, absolutely or relatively short umbilical cord, its true knot.

Thus, one of the modern methods of surgical intervention in the second period of labor is vacuum extraction of the fetus, safe for the mother and fetus with strict observance of the conditions, contraindications and proper technique of its implementation. The operation of vacuum extraction of the fetus in modern conditions is carried out using a modern device vacuum extractor system "KIWI". The main indications for this operation are progressive fetal hypoxia with the fetal head located in the outlet of the pelvis, and weakness of labor activity in the second period of labor.

The results of the analysis of the operation showed favorable outcomes for the life and health of the mother and newborn. Vacuum extraction of the fetus, subject to the conditions, indications and application techniques, is a gentle delivery operation that minimizes injuries to the mother and fetus.

**Conclusion.** Operative delivery by applying vacuum extraction of the fetus is a safe method of delivery for the mother and fetus with strict observance of the conditions, contraindications and proper technique of its implementation. The use of modern methods of vaginal delivery can reduce the percentage of cesarean section in modern obstetrics.

#### **LIST OF LITERATURE:**

1. Айламазян Э.К., Кулаков В.И., Радзинский В.Е., Савельева Г.М. Акушерство. Национальное руководство. - М.: ГЭОТАР-Медиа, 2012.
2. Власюк В.В. Родовая травма и перинатальные нарушения мозгового кровообращения. - СПб.: Нестор-История, 2009.
3. Гаврилова, А.А. Сверхранные и ранние преждевременные роды: спорные вопросы / А.А. Гаврилова, А.Н. Парыгина // Здоровье и образование в XXI веке. – 2018. – № 1. – С. 24-28.
4. Краснопольский В.И., Петрухин В.А., Логута-ва Л.С., и др. Вакуум-экстракция плода: методическое письмо. - М., 2012.
5. Caroccia, R. Ureaplasma urealyticum, Mycoplasma hominis and adverse pregnancy outcomes / R. Caroccia, G. Greub, D. Baud // Curr. Opin. Infect. Dis. 2013. – Vol. 26, № 3. – P. 231-240.
6. Ocviyanti, D. Risk Factors for Neonatal Sepsis in Pregnant Women with Premature Rupture of the Membrane / D. Ocviyanti, W.T. Wahono // J. Pregnancy. – 2018. – Vol. 2018. – P. 4823404.