

OBSTETRIC AND NEONATAL COMPLICATIONS OF DIABETES IN PREGNANT WOMEN

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✓ *Resume,*

The high rate of complications during pregnancy and childbirth, the growth of somatic and gynecological morbidity, the low level of reproductive health of women with latent and apparent diabetes at the present stage impose special requirements on the system of organization of obstetric and gynecological care, as the optimal approach to the management of pregnancy and childbirth, which minimizes complications for both mother and fetus.

Keywords: diabetes, hyperglycemia, pregnancy, abdominal birth

АКУШЕРСКИЕ И НЕОНАТАЛЬНЫЕ ОСЛОЖНЕНИЯ САХАРНОГО ДИАБЕТА У БЕРЕМЕННЫХ

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Высокий уровень осложнений во время беременности и родов, соматическая и гинекологическая заболеваемость, низкое репродуктивное здоровье женщин с латентным и ревматическим диабетом на современном этапе подразумевают особые требования к системам акушерской и гинекологической помощи. Оптимальный подход к ведению беременности и родам, который дополняет осложнения, как для матери, так и для плода.

Ключевые слова: диабет, гипергликемия, беременность, абдоминальные роды

ҲОМИЛАДОРЛАРДА ҚАНДЛИ ДИАБЕТНИНГ АКУШЕРЛИК ВА НЕОНАТАЛ АСОРАТЛАРИ

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Ушбу мақолада Бухоро вилоятида 2017 йилдан 2019 йилгача бўлган даврда ҳомиладорлиги қандли диабет билан кечган 135 та аёлнинг амбулатория карталари ва туғруқ тарихлари таҳлили натижалари келтирилган. Тадқиқотлар шуни кўрсатадики, коррекцияланмаган гипергликемия фонида кечган ҳомиладорлик 68,6% ҳолларда абдоминал туғруқ билан якунланган ва операцияларнинг 81% и патологик қон йўқотиш билан асоратланган.

Калит сўзлар: қандли диабет, гипергликемия, ҳомиладорлик, абдоминал туғруқ

The prevalence of all forms of diabetes mellitus (DM) among pregnant women reaches from 3.5% to 7.6% [4,8]. Perinatal mortality in pregnancy complicated by diabetes mellitus of any type is 30-50%. The prevalence of gestational diabetes mellitus (GSD) can vary from 1 to 14% (an average of 7%), depending on the analyzed population of women and the frequency of oral glucose tolerance test (OGTT) used to diagnose the disease. [1,3]. The prevalence and incidence of GSD in Uzbekistan is unknown, as epidemiological studies in accordance with international standards have not been conducted to study this problem. Also poorly organized program of screening and diagnosis of GDM. At the same time, according to who, 230,000 cases of GSD were recorded in the European Union and the United States in 2016. [6,11].

The medical and social significance of this problem is due to the high probability of complicated pregnancy and childbirth. Against the background of GDM there is a threat of heavy preeclampsia, premature birth, mngonogie, insufficient utero - placental circulation, which significantly violate the trophism of the fetus, leading to the development of chronic hypoxia, asymmetrical macrosomia, injury and asphyxia in childbirth. Perinatal mortality in this pathology ranges from

10% to 95%. [2,3]. It is known that the offspring of mothers with HSD is characterized by high infant and child morbidity. The frequency of reproductive losses is from 23 to 38%. [7,9]. However, studies have shown that during the latent forms of diabetes, the number of pre-eclampsia is up to 45.5%, anemia to 41.8%, mngonogie to 39.3%, pyelonephritis to 62.3%, Candida colpitis to 59.8% newborns with macrosomia to 22.1% of cases [5, 10]. The problem of pregnancy and childbirth in gestational diabetes is very relevant and still far from being resolved.

Objective: to Study the outcomes of childbirth for mother and fetus in women with diabetes mellitus.

Research material and methods:

We analyzed the outpatient records and birth histories of 135 women. The retrospective group included 67 women who passed through the regional perinatal center and No. 5, No. 6 family polyclinics of the city of Bukhara in the period from 2017 to 2019. The criteria for the sample of patients were:

1. Overweight and obese women (BMI over 30).
2. Pregnancy, which occurred on the background of gestational hypertension and preeclampsia of varying severity.
3. Clear diabetes in women.

4. Diabetic fetopathy (women who gave birth to children weighing more than 4000gr, fetal asymmetry).

5. Hypoglycemia of the newborn in the first three days.

The main group consisted of 57 women who had pregnancy on the background of apparent or gestational diabetes. The control group consisted of 11 healthy pregnant women with normal body weight, without diabetes in the "family history". The main focus of our study was the study of the background state of women throughout pregnancy, the study of maternal and placental factors of GSD development and the observation of the postpartum period in women and newborn.

All pregnant women carefully collected anamnesis (somatic, obstetric, gynecological). Laboratory diagnostic methods include: General blood and urine analysis,

biochemical blood tests, TSH and glycated hemoglobin. Fetal ultrasound was performed, body mass index (BMI) was determined in women of the examined groups. Anthropometry of the newborn from mothers with GSD was also performed.

Results and discussion.

The main focus of our study was the study of the background state of women throughout pregnancy, the study of maternal and placental factors of development of HSD and the observation of the course of the postpartum period. Below are the data on the distribution by place of residence, on the age category of women in the surveyed groups.

Table 1

Age characteristics of the surveyed women

Age			
18-24	25-30	31-35	36 and older
22±0.6	27.5±0.36	33±0.3	37.5±0.4

Depending on the place of residence, women are distributed as follows: the urban population was: in the retrospective group 40.5%, in the main group 33.3%, in the control group 42.9%, and the rural population was 59.5%, 66, 7% and 57.1%, respectively.

In terms of the main group: parvovirinae were: 27 (41 %), re-pregnant women was 38% (25 women), castorocauda occurred in 11% of cases (7 women), nagaragawa was 14% (8 women). The somatic status of the women surveyed is presented in table 2.

Table 2

Somatic status of examined women

No.	Disease	Retrospective n=67		Prospective			
				Main group n=57		control group n=11	
		Abs	%	Abs	%	Abs	%
1	1 Anaemia	47	70.1	41	71.9	2	18.2
I	Endocrine diseases						
1	Obesity	64	29.5	35	61.4	1	9
2	Overweight	0	0	15	26.3	1	9
3	Diffuse goiter	27	40.3	27	47.3	3	27.3
II	Urinary tract Infections						
1	Chronic pyelonephritis	20	29.8	17	29.8	0	0
2	Cystitis	7	10.4	13	22.8	0	0
III	Cardiovascular disease	7	10.4	5	8.8	0	0
IV	Varicose veins	11	16.4	9	16	2	18.2

The study of maternal factors of birth of children with diabetic fetopathy revealed that all women had a particular extragenital pathology as background or concomitant. Of them: anemia suffered 47 women from retrospective, 41 of the main, 2 women in the control group that were, respectively, 70.1 per cent; 71.9%; 18.2%. The control group included healthy women and women with grade I anemia who had Hb levels of at least 105 g / l. Obesity of various degrees suffered 64 (95.52%) women of the retrospective, 53 (93%) women primary and one woman (9%) in the control group, that says quite a common background pathology for diabetes. At the same time, 15 women of the main, and 1 women of the control group had excess weight, which is 26.3% and 9%. Despite the presence of anthropometric parameters of the presence of overweight and varying degrees of obesity in the retrospective group, we have not seen such a diagnosis. 27 (40.3%) women from

the retrospective group, 27 (47.37%) women from the prospective group, 3 women (27.27%) from the control group suffered from thyroid diseases, indicating the prevalence of this pathology in the endemic area.

Diseases of the genitourinary tract in the form of cystitis suffered 7 (10.45%) women from the retrospective group, 13 (22.8%) women from the perspective group. 20 (29.85%) women had a history of chronic pyelonephritis from the retrospective group, 17 (29.82%) women from the prospective group. In the control group of women, diseases of the genitourinary tract were not observed.

Diseases of the cardiovascular system were indicated by 7 (10.4%) women from the retrospective group, 5 (8.8%) women from the main group, from the control group did not suffer. Varicose veins affected 11 (16.4%) women from the retrospective, 9 (16%) women from the main group, two women (18.2%) from the control group.

Studying the outcomes of labor on retrospective materials revealed that hypertensive disorders during pregnancy in this group of examined, met in all cases, which may indicate vascular damage in all women with carbohydrate disorders. The threat of termination of pregnancy was observed in 9 (13%) women. Early toxicosis suffered 14 women was 12.6%. Pregnancy in 31% of cases was complicated by polygamy. At the same time, in 16% of cases, high water was combined with various types of fetal abnormalities.

Almost every fourth woman childbirth complicated by bleeding, which are primarily atonic or coagulopathies character caused by overstretched uterus and disturbance of blood coagulation. Bleeding was mainly observed in the postpartum or postoperative period. In 14% of cases, there was a progressive clinical signs of premature detachment of the normally located placenta, which required emergency surgery.

All children (100%) had a macrosomy, the mass of which exceeded 4000gr. At the same time, the asymmetric physique of newborns was dominated by the type of "caudal regression Syndrome". This was indicated by anthropometric indicators of the head circumference, the circumference of the shoulder girdle, the length of the

newborn and the record of the primary examination of the neonatologist, who took the child.

Of the 67 women from 46 women delivery ended by cesarean section, which accounted for 68.7 per cent. and the remaining 31.3% were delivered through natural birth canal. The main indications for surgery were: Tazo-head disproportion and severe preeclampsia with no effect from conservative therapy.

Women with complicated childbirth (bleeding, dead fetus, secondary wound healing after surgery, septic complications perinatal pathology and women with habitual miscarriages) are included in the burdened obstetric history.

Some complications of pregnancy, being characteristic not only for GSD, nevertheless, were more often observed in women with this disease. In the study of the course of pregnancy and childbirth on the history of childbirth and their own observations revealed that all (100%) pregnant women with diabetes pregnancy and childbirth proceeded with any complications. And in most cases, there were several complications in combination, both the mother and the fetus. Table 3 shows obstetric complications during pregnancy, childbirth and the postpartum period in women of different groups with diabetes.

Table No. 3

Obstetric complications of diabetes

No.	Obstetric complications	Retrospective Abs		the Main abs		Control Abs	
		n=67	%	n=57	%	n=11	%
1	Preeclampsia and gestational hypertension	67	100	37	65.4	0	0
2	Urinary tract Infections	21	31.3	27	47.4	1	9
3	Premature rupture of membranes	28	41.8	31	54.4	2	18
4	Macrosomia	67	100	32	56	2	18
5	Polyhydramnios	21	31	14	24	1	9
6	Bleeding	15	22	13	22.8	1	9
7	Caesarean section	40	60	23	41	3	27.3

Hypertensive complications occurred in all cases in women in the retrospective group, 65.4% of cases in the main group, probably against the background of previous vascular changes. Violation of the functional state of the fetus on the background of preeclampsia were frequent indications for delivery of pregnant women in this category by cesarean section.

Almost every second pregnant woman developed urinary tract infections: in the retrospective group 31.3%, in the main group 47.4%, in the control group 27.3%, which indicates a frequently combined pathology in diabetes mellitus. Quite often complicated during pregnancy and childbirth in diabetes premature rupture of fetal membranes, which in our observations was found in every second woman (54.4% of cases). Basically this complication was observed in women undergoing ORI, sinusitis and obesity during pregnancy.

In 34,3% of women, childbirth ended prematurely. This is due to the layered preeclampsia, against which, for health reasons and in the interests of the mother and fetus, the consilium decided to end the birth prematurely. 41% of delivery was performed by cesarean section.

Watching the postnatal group of women with diabetes revealed that 13 women (22.8% of the cases), this period was complicated by early bleeding that may be associated with hyperextension of the uterus in polyhydramnios and

large size of the fetus and may have had mixed etiology (atopic and coagulopathies origin). Basically, bleeding was observed in the first 2 hours after separation and isolation of the placenta and with a newborn body weight of more than 4000 grams during prolonged labor. In our cases, macrosomia occurred in 56% of cases in the main group and in 27.3% of cases in the control group.

As it is known, the risk of congenital anomalies in newborns from mothers with diabetes increases by 3 times compared to 1-2% of the baseline risk for all newborns, which occurred in our observations in 18% of cases (12 newborns). It was also revealed that the large size of the fetus led to a clinical discrepancy with the size of the mother's pelvis in 29.1% of cases, which required delivery by cesarean section in 41% of cases.

Newborns from mothers with DM also had an increased risk of neonatal hyperbilirubinemia, hypocalcemia, and polycythemia. This is confirmed by laboratory data, which are recorded in the individual chart of newborns.

Signs of diabetic fetopathy and hypoglycemia of newborns were manifested by various clinical manifestations, such as: unusual crying, apathy, apnea, cardiac arrest, seizures, cyanosis, hypothermia, hypotension, excitement, lethargy, tremor, tachypnea. Pasty soft tissue was observed in newborns in 23 (40.3%) cases.

Hepatomegaly occurred in 5 (8.8%) cases. They didn't meet in the control group. The moon-shaped face, short neck were most often noted. Macrosomia of newborns of the main group was almost 3 times more common than in pregnant control groups. Perinatal mortality was registered

in 2 cases, which amounted to 3.5% of cases. In both cases, this was due to hypoglycemia of the newborn and associated complications. Table 4 describes the "portrait of a newborn" born to a mother with diabetes.

Table No. 4

Characteristics of newborns born to mothers with diabetes

Signs	Main group		Control group	
	n=57	%	n=11	%
Pastiness soft tissue	23	40,3	2	18,2
Hepatomegaly	5	8,8	0	0
Moon face	9	15,8	1	9
Short neck	3	5,3	0	0
Macrosomia fetus	32	56	2	18,2
Short legs	7	12,3	0	0
Puffiness of the face	6	10,5	2	18,2
Hypertrichosis	11	19,3	1	9
Puffy eyes	9	15,7	0	0
Pronounced shoulder belt	4	7	1	9
Perinatal mortality	2	3,5	0	0
Signs of hypoglycaemia of the newborn	31	54,4	0	0

In almost all cases, the birth was complicated by certain complications. It was basically: bleeding in excess of 500ml at the time of birth per vias naturales and more than 1000 ml during a caesarean section. Krovopoteri wearing atonic and koagulopatiei nature was followed in 81% operational and in 45.6% of cases, conservative childbirth. With continued bleeding and high risk of massive blood loss in women 9 the transaction volume expanded to hysterectomy (5-23.8%) and hysterectomy (4-19%) of the uterus with ligation of two pairs of vessels. Maternal mortality was registered in 1 case, which was 4.8%. The postpartum and postoperative period was also accompanied by complications, especially in women who underwent cesarean section (52.3%). Mostly, it was subinwalucia uterus, accompanied by lochiometra and hematometra. In all likelihood, this was due to the oppression of the contractile ability of the uterus due to prolonged overextension of its muscles and the phenomena of septic complications.

Thus, diabetes mellitus is an unfavorable background disease that complicates the course of pregnancy, childbirth and the postpartum period, leading to various pathological obstetric and perinatal outcomes.

Summary:

1. High (68.6%) of the percentage of surgical deliveries indicates that pregnancy in these women proceeded against neskorigirovannoe hyperglycemia, consequently, complications of the mother and fetus, which in the end was the indication for the abdominal delivery.

2. Pathological blood loss was accompanied by 81% operational and 45.6% conservative childbirth, and their massive character has led to the expansion of volume of operation in 9 women before the amputation (23.8%) and hysterectomy (19%) of the uterus.

3. It was possible to reduce operative childbirth to 34% mainly due to rational diet therapy and the choice of optimal individual insulin therapy.

4. The main cause of neonatal diseases of children born to mothers with diabetes is diabetic fetopathy, which leads to functional and morphological immaturity of the newborn even in full-term pregnancy

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АРИТМИИ ПРИ ОСТРОМ ИНФАРКТЕ МИОКАРДА

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✓ Резюме,

Нарушение ритма и проводимости - самое частое осложнение острого инфаркта миокарда. Было выявлено, что практически у всех больных с острым инфарктом миокарда, независимо от его локализации, были зарегистрированы наджелудочковые нарушения ритма, реже регистрировалось нарушение проводимости. При повторных инфарктах миокарда как с зубцом Q, так и без него чаще регистрируются сложные желудочковые нарушения ритма.

Ключевые слова: острый инфаркт миокарда, наджелудочковые и желудочковые нарушения ритма, нарушение проводимости.

ЎТКИР ИНФАРКТ МИОКАРДА АРИТМИЯЛАР

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✓ Резюме,

Ритм ва ўтказувчанликнинг бузилиши ўткир миокард инфарктнинг энг кенг тарқалган асоратидир. Ўткир миокард инфаркти бўлган деярли барча беморларда, жойлашувидан қайтий назар суправентрикуляр аритмия қайд этилган, камроқ тез-тез ўтказувчанлик бузилишлари қайд этилган. Иккала Q тўлқинли ва унсиз миокард инфаркти билан қоринча ритм бузилиши тез-тез қайд этилади.

Калит сўзлар: ўткир миокард инфаркти, суправентрикуляр ва қоринча ритм бузилиши, ўтказувчанликнинг бузилиши.

ARRHYTHMIA AT MYOCARDIAL INFARCTION

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Cardiac rhythm and conduction disorders are the most common complications of acute myocardial infarction. It was found out that almost all patients with acute myocardial infarction, regardless of its location, had registered supraventricular rhythm disorders, with conduction disorder rarely recorded. With repeated myocardial infarctions with both a Q wave and without it, complex ventricular arrhythmias are more often recorded.

Keywords: acute myocardial infarction, supraventricular and ventricular rhythm disorders, conduction disorder.

Актуальность

В структуре причин смертности в последнее десятилетие первое место занимают заболевания системы кровообращения. Анализ причин смертности от заболеваний сердечно-сосудистой системы показал, что около половины случаев приходится на долю ишемической болезни сердца [1]. Самым опасным является период обострения ишемической болезни сердца, клинические варианты которого объединяются одним термином "острый коронарный синдром" - это любая группа клинических признаков или симптомов, позволяющих подозревать острый инфаркт миокарда (ИМ) или нестабильную стенокардию [5,8]. Острый ИМ с подъемом сегмента ST в 90-95% случаев осложняется развитием аритмий сердца, являющихся самой частой

причиной смерти на догоспитальном этапе, а на госпитальном этапе - второй причиной по частоте смертельных исходов [3]. Актуальность данной проблемы заключается в низкой эффективности диагностики дебюта нарушений ритма, прогноза их течения и недостаточно эффективного лечения [7]. Половина летальных исходов при ИМ происходит в первые два часа, в большинстве случаев вследствие фибрилляции желудочков. На госпитальном этапе аритмии являются второй по частоте (после острой сердечной недостаточности) причиной летальных исходов больных с ИМ. Нарушения ритма являются отражением обширного поражения миокарда и часто вызывают появление или усиление нарушений гемодинамики и клинических проявлений недостаточности кровообращения. Пациенты, пережившие инфаркт миокарда, имеют высокий риск