OPERATIVE DELIVERY IN WOMEN WITH BENIGN UTERINE TUMORS

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INTRODUCTION

Preserving the reproductive health of women and improving the condition of the fetus and newborn remain a priority issue for the health of the nation. The most common benign tumor of the female genital area is uterine leiomyoma (LM) is a hormone-dependent benign tumor of the myometrium, which in the structure of gynecological diseases takes second place, and in women of reproductive age is noted in 25.0–40.0% [1–3]. The incidence of this tumor in women of young reproductive age has increased [4]. The development of LM has increased dramatically after 30 years, when modern women plan to implement reproductive function [5–7]. According to studies in the presence of LM complications of pregnancy, childbirth, postpartum, fetal and newborn status develop in 10–71% of cases [7–9]. The prevalence of obstetric and perinatal complications in women with LM of reproductive age necessitates their prediction and prevention.

LITERATURE DATA ANALYSIS AND RESEARCH TASKS

Many studies have been devoted to the effects of LM on reproductive function, gestational period, childbirth, postpartum, fetal and newborn status. According to the authors it is noted that women with LM increase the frequency of gestational complications – the threat of interruption, placental disorders; the risk of premature birth is increased, the frequency of complications in childbirth – premature detachment of the placenta and bleeding, fetal distress [8–10].

Despite numerous studies of the etiopathogenesis of LM, conservative treatment of uterine fibroids at reproductive age is not always effective [11–15]. The latter increases the number of women with LM after the age of 30 who plan to exercise their reproductive function at this age [16]. Pregnancy in women with LM after 30 years is accompanied, respectively, by an increase in the incidence of obstetric and perinatal complications [3].

The issues of childbirth tactics for women with LM are debatable. Pregnancy planning for such women after 30 years increases the incidence of pre-existing myomectomy. Given the possible complications during pregnancy and childbirth – a rupture of the uterus by the scar after myomectomy [17] – the timing and delivery tactics of such women remain insufficiently defined. Impact of LM on increasing the frequency of operative delivery is discussed; according to the authors, the incidence of caesarean section in women with LM reaches 34.0% [8, 10]. However, there is insufficient work on identifying criteria that contribute to increasing the incidence of operative delivery in women with this pathology.

The issues of choosing the childbirth tactics for women with LM in the presence of single and multiple nodes of different sizes and localization are not sufficiently clarified; their dependence on the location of the nodes and placenta and, accordingly, on the complications of the gestational period and childbirth in these women.

The aim of the study was to determine the role of operative delivery in the childbirth tactics for women with benign uterine tumors (independent childbirth or operative delivery) based on the identification of pathogenetically substantiated criteria for operative birth, to prevent obstetric and perinatal complications.

MATERIALS AND METHODS

We studied 110 women with benign uterine tumors (with uterine leiomyoma) and 50 healthy women (control group) in pregnancy, childbirth and postpartum. The number of nodes is single or multiple, their size, localization (intramural, subserous or submucosal), location of nodes relative to the placenta was determined by ultrasound (LOGIQ 200 by General Electric). 77 (70.0%) from 110 women had one LM node (group 1), and 33 (30.0%) had multiple LM nodes (group 2). Single and multiple LM nodes were of four types. The type of LM was determined by the number, size of nodes, their location according to the clinical and ultrasonic classification of LM (D. Wildemeersch, E. Schacht, 2002):

- type I – single or multiple small intramural nodes or subserous nodes (less than 3 cm), absence of submucosal nodes;
- type II – single or multiple intramural or subserous nodes (3-6 cm), absence of submucosal nodes;
- type III – one or multiple intramural or subserous nodes (more than 6 cm), absence of submucosal nodes,
- type IV – one or multiple intramural or subserous nodes, suspicion or presence of a submucosal node.

Tactics of delivery (independent childbirth or operative delivery) by caesarean section are defined in women with LM, depending on the

presence of one LM node or multiple nodes, their size and localization; from the coincidence of the location of nodes and the placenta; from complications that developed during pregnancy and childbirth.

The choice of cesarean section method was determined by the state of pregnancy, delivery, fetus, obstetric situation. Corporal operation method was performed in cases of intramural location of node III type LM in the lower uterine segment; transverse position of the fetus with the back facing downwards. In all other cases is in the lower segment of the uterus cross section. For anesthesia in caesarean section endotracheal anesthesia or epidural anesthesia was used.

The reliability of the difference between the groups was evaluated by the Fisher angular transformation criterion using Microsoft Excel 2010. The differences were considered significant at $p < 0.05$.

STUDY RESULTS AND DISCUSSION

I type LM was detected in 63 (57.26%) cases, II type LM – in 27 (24.54%), III type LM – in 10 (9.10%), IV type LM – in 10 (9.10%) women. Locations of nodes, placenta, and frequency of coincidence for nodes and placenta of location in the presence of one node and multiple LM were analyzed.

Thus, nodes in the uterus along the anterior wall were located in 43 (55.84%) and 25 (73.53%) women from 1 and 2 groups respectively, p >0, 05; on the back wall – in 27 (35.06%) and 13 (52.94%) (p >0.05). Multiple nodes were observed on the lateral (left and right) uterus walls 10.18 times more often, than one node – in 26.47% and 2.60% cases respectively ($p < 0.05$). Nodes were located in the lower uterine segment in 2 (2.60%) and 3 (9.09%) cases of the 1 and 2 groups (p >0.05). Node at the bottom of the uterus with multiple LM was noted in 7 (21.21%) cases, which is 5.44 times more frequent than for one node – in 3 (3.90%) women ($p < 0.05$).

Placenta location on the anterior wall was found in 31 (40.62%), 15 (45.45%) and 26 (52.0%) women from 1, 2 and control groups respectively, no significant difference between the groups was noted (p >0.05). Posterior placenta wall was in 38 (49.35%) and 8 (24.24%) women of the 1st and 2nd groups ($p < 0.05$); in 19 (38.0%) – of the control group (there were no differences with indicators of groups with LM, p >0,05). Placental localization near the uterus bottom was observed in 4 (5.19%), 4 (12.12%) and 4 (8.0%) cases from 1, 2 and control groups (p >0.05). Placenta was located 2.92 times more frequently at the lateral walls with multiple LM than with one node – in 5 (15.15%) and 4 (5.19%) cases (p >0.05); the frequency was significantly higher in multiple LM, than in the control group – 1 (2.0%) case ($p < 0.05$). Placenta in the lower uterine segment was observed in 2.33 times more often with multiple LM than with one node – in 2 (2.60%) and 2 (6.06%) cases from 1 and 2 groups respectively (p >0.05).

Placenta localization relative to the LM nodes was analyzed. Coincidence of placenta and nodes location along the anterior wall of the uterus was detected in 19 (24.68%) and 14 (42.42%) cases in 1 and 2 groups (p >0.05); on the back wall – in 11 (14.29%) and 4 (12.12%) (p >0.05); lateral walls – in 1 (1.30%) and 2 (6.06%) (p >0.05); in the lower uterine segment – 2 (2.60%) and 2 (6.06%) (p >0.05); near the bottom of the uterus – in 1 (3.03%) case of multiple LM. Therefore the coincidence of nodes and placenta localization was observed in 33 (42.86%) cases of the presence of one node and in 23 (69.70%) for multiple LM I–IV types ($p < 0.05$).

Above factors explain the need to consider the impact of benign uterine tumors on pregnancy, given that the development of complications of such influences in determining the tactics of delivery of these women.

An analysis of pregnancy complications in women with LM showed that early preeclampsia developed in 9 (11.69%) and 4 (12.12%) cases in 1 and 2 groups; anemia – in 43 (55.84%) and 18 (54.55%) respectively (p >0.05).

A frequent complication of the gestational period was the threat of termination of pregnancy, which was noted in every third case of multiple LM and every fourth in the presence of one node: in 10 (30.30%) and in 20 (25.97%) (p >0.05). The pathogenetic basis for the threat of termination of pregnancy was placental insufficiency, which developed in almost every second pregnant woman with LM – in 34 (44.16%) and 15 (45.45%) with one node and multiple LM respectively (p >0.05). Placental insufficiency preceded partial detachment of the placenta in the gestational period in 14 (18.18%) and 9 (27.27%) cases of the presence of single and multiple nodes of the LM respectively (p >0.05). For development of placental insufficiency the complication of pregnancy with hypertension in 5 (6.49%) and 2 (6.06%) women was significant, preeclampsia of the middle degree – in 8 (10.39%) and 3 (9.09%), severe preeclampsia – in 4 (5.19%) and 1 (3.03%) cases in the 1 and 2 groups (p >0.05).

Placental insufficiency and partial detachment of the placenta preceded fetal distress during the gestation period, which developed in 24 (31.17%) and 12 (36.36%) cases of single node and multiple LM respectively (p >0.05). Polyhydramnios were observed in 14 (17.50%) and 7 (20.59%), low water in 5 (6.25%) and 2 (5.88%) cases in the 1 and 2 groups respectively (p >0.05).

Myomectomy before pregnancy or in the II trimester performed in multiple LM in 3 (9.09%) cases of twisting the leg of the subserous node of the III–IV types and in 2 (6.06%) – rapid growth and degenerative changes node.

The threat of premature birth occurred in every fourth woman – in 19 (24.68%) with one node of LM and in 8 (24.24%) with multiple nodes. This complication was contributed by factors such as the threat of termination of pregnancy: placental insufficiency, preeclampsia of medium and severe degree.

Cases of lack of a probable difference between pregnancy complication rates in women with one node and multiple LM can be explained by the equivalence of having one LM node III–IV types of or multiple LM nodes I–II types.

Thus coincidence of LM nodes I-IV types and placenta localization in 33 (42.86%) cases of one node and in 23 (69.70%) – multiple nodes ($p < 0.05$) had a complication in gestational period: placental insufficiency in 44.16% and 45.45%; threat of termination of pregnancy in 30.30% and 25.96%; partial placental detachment in 18.18% and 27.27%; myomectomy in the II trimester in 7.70% and 15.15%; hypertension in 6.49% and 6.06%; average degree preeclampsia in 10.39% and 9.09%; severe preeclampsia in 5.19% and 3.03%; fetal distress in 31.17% and 36.36%; threat of premature birth in 24.68% and 24.24% women with one node and multiple LM respectively (p >0.05).

Numerous complications of pregnancy with a significant number of coincidences of the location of one or multiple nodes of the LM and the placenta requires determining the tactics of delivery of these women (an independent childbirth or operative delivery) and criteria for planned operative delivery.

Childbirth occurred in all 110 women with single and multiple LM nodes. 84 women (76.36%) were urgently born; 60 (77.92%) women in the group with one node LM, 24 (72.73%) in the group with multiple nodes (p >0.05). Premature births occurred in almost every fourth woman: in 26 (23.64%) out of 110 studied; in 17 (22.10%) and 9 (27.27%) cases in the 1 and 2 groups respectively (p >0.05).

68 (61.82%) women with LM I–II types had independent birth: 49 (63.64%) with one node and 19 (57.58%) with multiple LM (p >0.05). A frequent complication in childbirth was premature rupture of the fetal membranes in 16 (20.0%) and 6 (17.65%) births in 1 and 2 groups (p >0.05), which contributed to the development of preterm birth. Weakness of childbirth activity developed in almost every fifth births with one node in the uterus – in 15 (19.48%) and every third – with multiple nodes – in 10 (30.30%) (p >0.05), but weakness childbirth in these cases was subject to medical correction. Independent childbirth occurred at the coincidence of the location of one node LM type I and the placenta on the anterior or posterior uterine walls in 5 (6.49%) cases in 1 group and in 9 (27.27%) women in 2 group (p <0.05). Physiological blood loss in such cases was due to the active management of the third period of childbirth.

Manual interventions at independent childbirth (both urgent and premature) were applied at multiple LM 2.21 times more often than in the presence of one node – in 7 (14.29%) and 6 (31.58%) births in 1 and 2 groups respectively (p <0.05).

Operative delivery as the birth tactics for women with single and multiple LM nodes was applied in 42 (38.18%) cases: in 28 (36.36%) with one LM node and in 14 (42.42%) with multiple LM (p >0.05).

According to the researchers "reduced blood flow to the node of the myoma and adjacent tissues causes partial ischemia and decidual necrosis in placental tissues, adjacent to the node of the myoma" [18]. Given this the coincidence of the location LM node and placenta can be considered as one of the pathogenetic mechanisms of its detachment. On this basis, the need for operative delivery by caesarean section in a planned order was determined by the coincidence of location of the placenta and one LM node II–IV types in 20 (25.97%) cases in group 1, and multiple LM nodes I–IV types and placenta in 12 (36.36%) cases in 2 group (p >0.05) (Table). Such delivery tactics are chosen to prevent premature detachment of the placenta, bleeding, and fetal distress.

Planned operative delivered women after myomectomy before pregnancy, as well as in the second trimester of this pregnancy to prevent the inability of the scar on the uterus and rupture of the uterus in childbirth. A planned caesarean section was performed at the node localization in the lower uterine segment (3.03% women in group 2) which hinders the birth of the fetus; in the case (3.03% women in group 2) of the central placenta previa with multiple LM. Planned operated women with incorrect fetal position were observed 2.8 times more frequently with multiple LM than with a single node. Planned caesarean section performed in women with scar on the uterus after previous cesarean section – 6 (7.79%) and 3 (9.09%) cases at one node and multiple LM; at anatomically narrow pelvis in 4 (5.19%) and 2 (6.06%) women in 1 and 2 groups (p >0.05); congenital heart defects – in 1 (1.30%) in group 1. There is a combination of several indications for planned operative delivery in women in 1 and 2 groups.

Draws attention to the fact that multiple LM tends to have more planned operative delivery than in the presence of one node, which is influenced by the higher frequency of coincidence of LM nodes II–IV types and placenta location, myomectomy in the II trimester, wrong fetus position.

Complications in childbirth affected the delivery of urgent by caesarean section 8 (10.39%) women with one node and 2 (6.06%) with multiple LM (p >0.05). Urgent delivery was 28.57% at one node of myoma and 14.28% at multiple LM from the number of caesarean sections in 1 and 2 groups (p >0.05).

The lower frequency of urgent delivery is associated with an increase in the frequency of timely, planned caesarean section, which is the method of choice, when developing tactics for delivery of women with LM to prevent obstetric and perinatal complications in childbirth.

Combination of several pathological conditions of maternity and fetus and indications for urgent operative delivery were noted. Urgent operative delivery occurred with premature detachment of the placenta and bleeding which the coincidence of localization of the node of type I and placenta in 8 (10.39%) cases at one node and 2 (6.06%) at multiple LM, and presence in 4 (5.19%) and 2 (6.06%) of these women respectively severe preeclampsia (p >0.05). In this regard, the urgent caesarean section is carried out both at urgent delivery and at premature birth. In 4 (5.19%) of these cases with one LM node and 2 (6.06%) multiple nodes fetal distress developed (p >0.05). Placental insufficiency in the gestational

Table. Indications for planned operative delivery with uterine leiomyoma, abs. (%)*

Indication	Group 1 (n = 77)	Group 2 (n = 33)
Coincidence of placenta and one LM node II–IV types or multiple LM nodes I–IV types location	20 (25.97)	12 (36.36)
Myomectomy before pregnancy or in the II trimester	6 (7.79)	5 (15.15)
Node in the lower uterine segment	0 (0)	1 (3.03)
Central placenta previa	0 (0)	1 (3.03)
Incorrect fetal position	5 (6.49)	6 (18.18)
A scar on the uterus after previous caesarean section	6 (7.79)	3 (9.09)
Anatomically narrow pelvis	4 (5.19)	2 (6.06)
Congenital heart defects	1 (1.30)	0 (0)

* there are no statistically significant differences between group 1 and 2, p >0.05

ISSN 2309-4117

period also contributed to this. Urgent deliveries were subjected to cases with clinically narrow pelvis – 3 (3.90%) and 1 (3.03%) in 1 and 2 groups (p >0.05); with weakness of labor activity, that was not subject to medical correction – 4 (5.19%) and 1 (3.03%) cases (p >0.05).

Regarding the features of operative delivery, myomectomy was performed in 6 (21.43%) women with one node and in 5 (35.71%) with multiple LM (frequency of the number of women delivered operatively in 1 and 2 groups respectively) (p >0.05). This was performed in the presence of LM nodes I–IV types subserosal located on the stem or on a broad basis. In 2 (14.29%) women with multiple LM, subserous nodes of type III with necrosis foci were removed. Myomectomy of the nodes, located on the vascular bundles, as well as the nodes on a broad basis in the lower uterine segment was not performed. The dense attachment of the placenta and its manual separation during operative delivery was performed 2.5 times more frequently with multiple LM, than in the presence of one node – in 4 (14.29%) and 4 (28.57%) cases in 1 and 2 groups respectively (p >0.05).

Concerning the peculiarities of operative delivery in the case of multiple LM nodes type IV (one case, 7.14%) impaired contractile activity of the myometrium led to uterine atony, intraoperative pathological blood loss, in connection with which the extirpation of uterus without appendages was performed.

In the postpartum period the violation of the contractile activity of the myometrium in parturient woman with LM was manifested by the subinvolution of the uterus both after independent birth and after cesarean section. Subinvolution of the uterus was noted 1.5 times more often with multiple fibroids than in one node – in 18 (56.25%) and in 29 (37.66%) cases respectively (p >0.05). The frequency of this complication was influenced by the size and number of LM nodes II–IV types, large newborn, polyhydramnios. Anemia was detected in 29 (37.66%) and 14 (42.42%) parturients in 1 and 2 groups (p >0.05); the differences of LM groups with control group (3 (6.0%) cases) are significant (p <0.05).

We noted a significant frequency of complications of the course of gestation, childbirth, perinatal complications in women with LM coincides with the results of other researchers, but pathogenetically justified criteria for operative delivery of women with benign uterine tumors, on the basis of which it is possible to reduce the frequency of urgent caesarean section, the frequency of obstetric complications in childbirth and perinatal complications.

CONCLUSIONS

1. Tactics of delivery for women with benign uterine tumors (with LM) (independent childbirth or operative delivery by caesarean section) depends on LM type (I–IV), number of nodes, their size and localization; node/nodes and placenta coincidence; complications, that developed in the gestational period and childbirth.

2. The coincidence of the location of the LM node(s) II–IV types and placenta should be considered pathogenic basis of placental insufficiency, placental detachment in the gestational period and childbirth, bleeding, fetal distress, and prognostic criterion of obstetric and perinatal complications.

3. Pathogenetically justified criteria for planned operative delivery by caesarean section of women with benign uterine tumors to consider: coincidence of the location of the placenta and one LM node II–IV types or multiple LM nodes I–IV types; myomectomy before pregnancy or in the II trimester; scar on the uterus after a previous caesarean section.

4. Independent childbirth in women with LM is possible at the coincidence of the location of the node of LM type I and the placenta.

5. Presence of these criteria for operative delivery in women with LM determines the planned caesarean section by the method of choice in childbirth tactics to prevent obstetric and perinatal complications: premature detachment of the placenta, bleeding, fetal distress, rupture of the uterus.

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ОПЕРАТИВНЕ РОДОРОЗРІШЕННЯ ЖІНОК ІЗ ДОБРОЯКІСНИМИ ПУХЛИНАМИ МАТКИ

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Мета дослідження: визначення ролі оперативного родорозрішення в тактиці розродження жінок із доброякісними пухлинами матки на підставі виявлення патогенетично обґрунтованих критеріїв для оперативного розродження, запобігання акушерським і перинатальним ускладненням.
Матеріали та методи. У 110 жінок із лейоміомою матки (ЛМ) – 77 (70,0%) з одним вузлом (1 група) і 33 (30,0%) з множинними вузлами (2 група) визначена тактика розродження. Для цього проаналізовано тип ЛМ, розташування вузлів відносно плаценти, ускладнення вагітності та пологів.
Результати дослідження та їх обговорення. Виявлений збіг локалізації вузлів ЛМ I–IV типів і плаценти в 33 (42,86%) жінок з одним вузлом і в 23 (69,70%) з множинними вузлами ЛМ спричинив ускладнення в гестаційному періоді: плацентарну недостатність – у 44,16% і 45,45%; загрозу переривання вагітності – в 30,30% і 25,96%; часткове відшарування плаценти – у 18,18% і 27,27%; міомектомію – в 7,70% і 15,15%; дистрес плода – в 31,17% і 36,36%; загрозу передчасних пологів – у 24,68% і 24,24% вагітних відповідно з одним вузлом і множинною ЛМ та потребував визначення тактики розродження. Кесарів розтин було виконано в 42 (38,18%) випадках: у 28 (36,36%) жінок з одним вузлом і в 14 (42,42%) з множинними. Тенденція до більшої кількості оперативних пологів при множинній ЛМ обумовлена більшою частотою збігу розташування вузлів і плаценти та ускладнень вагітності. Ургентне родорозрішення відбулося у 28,57% вагітних з одним вузлом і в 14,28% з множинною ЛМ внаслідок передчасного відшарування плаценти і кровотечі, дистресу плода. Менший відсоток ургентного оперативного розродження обумовлений збільшенням частоти планового кесаревого розтину при ЛМ.
Висновки. Збіг розташування вузла/вузлів ЛМ II–IV типів і плаценти можна вважати патогенетичним підґрунтям плацентарної недостатності, відшарування плаценти в гестаційному періоді та в пологах, кровотечі, дистресу плода і прогностичним критерієм акушерських і перинатальних ускладнень. Патогенетично обґрунтованими критеріями для планового оперативного родорозрішення поряд із іншими чинниками слід вважати: збіг розташування плаценти і вузла ЛМ II–IV типів або множинних вузлів I-IV типів; міомектомію. Наявність зазначених критеріїв робить плановий кесарів розтин методом вибору в тактиці розродження жінок із ЛМ.

Ключові слова: доброякісні пухлини матки, типи лейоміоми матки, тактика розродження, оперативне родорозрішення.

ОПЕРАТИВНОЕ РОДОРАЗРЕШЕНИЕ ЖЕНЩИН С ДОБРОКАЧЕСТВЕННЫМИ ОПУХОЛЯМИ МАТКИ

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Цель исследования: определение роли оперативного родоразрешения в тактике родоразрешения женщин с доброкачественными опухолями матки на основании выявления патогенетически обоснованных критериев для оперативного родоразрешения, предупреждения акушерских и перинатальных осложнений.
Материалы и методы. У 110 женщин с лейомиомой матки (ЛМ) – 77 (70,0%) с одним узлом (1 группа) и 33 (30,0%) с множественными узлами (2 группа) определена тактика родоразрешения. Для этого проанализирован тип ЛМ, расположение узлов относительно плаценты, осложнения беременности, родов.
Результаты исследования и их обсуждение. Выявленное совпадение расположения узлов ЛМ I–IV типов и плаценты у 33 (42,86%) беременных с одним узлом и у 23 (69,70%) с множественными узлами ЛМ повлекло осложнения в гестационном периоде: плацентарную недостаточность – у 44,16% и 45,45%; угрозу прерывания беременности – у 30,30% и 25,96%; частичную отслойку плаценты – у 18,18% и 27,27%; миомэктомию – у 7,70% и 15,15%; дистресс плода – у 31,17% и 36,36%; угрозу преждевременных родов – у 24,68% и 24,24% женщин соответственно с одним узлом и множественной ЛМ и потребовало определения тактики родоразрешения. Кесарево сечение было выполнено в 42 (38,18%) случаях: у 28 (36,36%) женщин с одним узлом и у 14 (42,42%) с множественными. Тенденция к большей частоте оперативных родов при множественной ЛМ обусловлена большей частотой совпадения расположения узлов и плаценты и осложнений беременности. Ургентное родоразрешение выполнено у 28,57% беременных с одним узлом ЛМ и у 14,28% с множественными узлами вследствие преждевременной отслойки плаценты и кровотечения, дистресса плода. Меньший процент ургентного оперативного родоразрешения обусловлен увеличением частоты планового кесаревого сечения при ЛМ.
Выводы. Совпадение расположения узла/узлов ЛМ II–IV типов и плаценты можно считать патогенетическим фактором плацентарной недостаточности, отслойки плаценты в гестационном периоде и в родах, кровотечения, дистресса плода и прогностическим критерием акушерских и перинатальных осложнений. Патогенетически обоснованными критериями для оперативного родоразрешения наряду с другими факторами следует считать: совпадение расположения плаценты и узла ЛМ II–IV типов или множественных узлов I–IV типов; миомэктомию. Наличие указанных критериев делает плановое кесарево сечение методом выбора в тактике родоразрешения женщин с ЛМ.

Ключевые слова: доброкачественные опухоли матки, типы лейомиомы матки, тактика родоразрешения, оперативное родоразрешение.

OPERATIVE DELIVERY IN WOMEN WITH BENIGN UTERINE TUMORS

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Objective of the study: to determine the role of operative delivery in the childbirth tactics for women with benign uterine tumors based on the identification of pathogenetically substantiated criteria for operative birth, to prevent obstetric and perinatal complications.
Materials and methods. In 110 women with uterine leiomyoma (LM) – 77 (70.0%) with one node (Group 1) and 33 (30.0%) with multiple nodes (Group 2) delivery tactics were defined. For this purpose, the type of LM, the location of the nodes relative to the placenta, complications of pregnancy, childbirth were revealed and analyzed.
Study results and discussion. The revealed coincidence of the location for I–IV types LM nodes and placenta in 33 (42.86%) cases of one node and in 23 (69.70%) of multiple LM caused complications in the gestational period: placental insufficiency – in 44.16% and 45.45%; threat of interruption – in 30.30% and 5.96%; partial detachment of the placenta – in 18.18% and 27.27%; myomectomy – in 7.70% and 15.15%; fetal distress – in 31.17% and 36.36%; the threat of premature birth – in 24.68% and 24.24% of cases with the one node and multiple LM respectively and necessitated the determination of delivery tactics. Caesarean section was done in 42 (38.18%) cases: in 28 (36.36%) women with one node and in 14 (42.42%) with multiple nodes. The tendency to a higher frequency of operative delivery with multiple LM is due to the greater frequency of coincidence of the nodes location and placenta and pregnancy complications. Urgent delivery was made in 28.57% cases with one node of LM and in 14.28% with multiple nodes due to premature detachment of the placenta and bleeding, fetal distress. A smaller percentage of urgent operative delivery is due to an increase frequency of elective caesarean section for LM.
Conclusions. The coincidence of II–IV types LM node/nodes and placenta location is considered to be a pathogenetic factor in placental insufficiency, placental abruption in the gestational period and during childbirth, bleeding, fetal distress, and the prognostic criterion for obstetric and perinatal complications. Among pathogenetically substantiated criteria for operative delivery along with other factors consider: coincidence of the location of the placenta and II–IV types LM node or multiple I-IV types LM nodes; myomectomy. Presence of these criteria determines the planned caesarean section by the method of choice in the childbirth tactics for women with LM.

Keywords: benign uterine tumors, types of uterine leiomyoma; childbirth tactics; operative delivery.