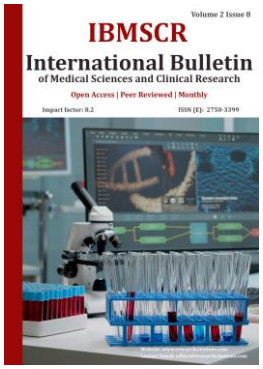

PLACENTA ACCRETA SPECTRUM

Bektemirova Zuxra Omonjon qizi
Akhmatova Durdona Daniyar qizi
Tashkent Pediatric Medical institute
Bektemirovazuxra741@gmail.com
+998939588512
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ANNOTATION

Placenta accreta spectrum, formerly known as morbidly adherent placenta, refers to the range of pathologic adherence of the placenta, including placenta increta, placenta percreta, and placenta accreta. There are several risk factors for placenta accreta spectrum. The most common is a previous cesarean delivery, with the incidence of placenta accreta spectrum increasing with the number of prior cesarean deliveries. Antenatal diagnosis of placenta accreta spectrum is highly desirable because outcomes are optimized when delivery occurs at a level III or IV maternal care facility before the onset of labor or bleeding and with avoidance of placental disruption. The most generally accepted approach to placenta accreta spectrum is cesarean hysterectomy with the placenta left in situ after delivery of the fetus (attempts at placental removal are associated with significant risk of hemorrhage). The data on modern methods of labor management in this pathology are presented: balloon occlusion of the common iliac arteries, selective embolization of the uterine arteries, bottom caesarean section.

Key words: Placenta accreta spectrum, balloon occlusion of the common iliac arteries, uterine artery embolization, bottom caesarean section, hysterectomy.

АННОТАЦИЯ

Спектр срастания плаценты, ранее известный как патологически прилипающая плацента, относится к диапазону патологического срастания плаценты, включая приращение плаценты, перкретирование плаценты и приращение плаценты. Существует несколько факторов риска развития срастания плаценты. Наиболее распространенным является предыдущее кесарево сечение, причем частота срастания плаценты увеличивается с увеличением числа предыдущих кесаревых сечений. Антенатальная диагностика спектра срастания плаценты крайне желательна, поскольку результаты оптимизируются, когда родоразрешение происходит в учреждении по уходу за матерью III или IV уровня до начала родов или кровотечения и во избежание разрушения плаценты. Наиболее общепринятым подходом к лечению срастания плаценты является кесарево сечение с гистерэктомией с оставлением плаценты на месте после родов плода (попытки удаления плаценты связаны со значительным риском кровотечения). Представлены данные о современных методах ведения родов при данной патологии: баллонная окклюзия общих подвздошных артерий, селективная эмболизация маточных артерий, нижнее кесарево сечение.

Ключевые слова: спектр приращения плаценты, баллонная окклюзия общих подвздошных артерий, эмболизация маточных артерий, донное кесарево сечение, гистерэктомия.

ANNOTATSIYA

Platsenta akkreta spektri, ilgari patologik yopishgan platsenta sifatida tanilgan bo`lib qator ko`rinishlari mavjud, platsenta increta, platsenta percreta, va platsenta accrete shular jumlasidandir. Platsenta akkreta spektri uchun bir nechta xavf omillari bor. Eng keng tarqalgani - bu avvalgi kesarcha kesish bilan tug'ish va uning asoratlari. Platsenta akkreta spektrining antenatal diagnostikasi va III yoki IV darajadagi onalarni parvarish qilish juda muhim chunki bu tug'ruq yoki qon ketish boshlanishidan oldin va platsenta buzilishining oldini olishdagi natijalarni optimallashtiradi. Platsenta akkreta spektriga eng ko'p qabul qilingan yondashuv - bu homila tug'ilgandan keyin joyida qolgan platsenta bilan kesarcha kesish gisterektomiyasi (platsentani olib tashlashga urinishlar qon ketish xavfi bilan bog'liq). Maqola ushbu patologiyada tug'ruqni boshqarishning zamonaviy usullari to'g'risidagi ma'lumotlarni o'z ichiga oladi: umumiy yonbosh arteriyalarining balon okklyuziyasi, bachadon arteriyalarining selektiv embolizatsiyasi va pastki kesarcha kesish.

Kalit so'zlar: platsenta akkreta spektri, umumiy yonbosh arteriyalarining balon tiqilishi, bachadon arteriyasi embolizatsiyasi, pastki kesarcha kesish, histerektomiya.

Introduction

The problem of obstetric bleeding is currently still relevant. Massive blood loss and hemorrhagic shock is one of the leading causes of maternal mortality [1, 2, 3, 4].

Approximately 10 of all bleeding in obstetrics is due to placental increment and disorders of its separation. The etiopathogenesis of this condition remains not fully understood. According to one hypothesis, the ingrowth of placental tissue into the uterine wall occurs because of defective decidualization due to surgical interventions on the uterus and excessive invasion of the trophoblast [5, 6]. Currently, the average frequency of placental increment is one case per 1000-2500 births [7]. Taking into account the tendency to increase the frequency of cesarean section worldwide, the risk of placenta previa and ingrowth increases linearly [8]. Placenta increment is qualified by the degree of its invasion into the myometrium, isolating placenta accreta vera (villi penetrate into the submucous zone of the myometrium), placenta increta (villi penetrate into the myometrium) and placenta percreta (invasion of the myometrium and serous lining of the uterus, bladder, etc.).

Risk Factors

There are several risk factors for placenta accreta spectrum. The high-risk group of placenta accretion includes women with uterine operations: curettage of the uterus, hysteroresectoscopy, removal of endometrial polyp, conservative myomectomy, chronic endometritis, Ascherman syndrome, genital abnormalities. Placenta previa is another significant risk factor. Placenta accreta diapason occurs in 3 % of women diagnosed with placenta previa and no previous cesarean deliveries. In the setting of a placenta previa and one or further former cesarean deliveries, the threat of placenta accreta diapason is dramatically increased. For women with placenta previa, the risk of placenta accreta is 3%, 11%, 40%, 61%, and 67%, for the first, second, third, fourth, and fifth or more cesarean, respectively.

Moreover, abnormal results of placental biomarkers increase the risk of placenta accreta spectrum. For example, unexplained elevation in maternal serum alpha-fetoprotein is associated with an increased risk of placenta accreta spectrum. However, maternal serum alpha-fetoprotein is a poor predictor of placenta accreta spectrum and is not accurate enough

to be clinically useful. Other placental analytes linked to placenta accreta diapason include gestation- associated tube protein A, pro B- type natriuretic peptide, troponin, free β- hCG(mRNA), and mortal placental lactogen(cell-free mRNA) 16 17 18 19 20. In addition, other proposed labels of aberrant trophoblast irruption, similar as total placental cell-free mRNA, may be associated with placenta accreta diapason 21. As with nascence fetoprotein, they are too nonspecific for clinical use.

Diagnosis of Placenta Accreta Spectrum

A poor clinical picture and the absence of specific ultrasound signs with normal localization and shallow invasion of the placenta into the myometrium complicate the diagnosis of placental increment [9]. For timely detection of placental increment, it is necessary to be especially vigilant in women with a cesarean section and a history of myomectomy with placenta previa, when it is located along the anterior wall of the uterus. The clinical picture, micro- or macrohematuria (when growing into the back wall of the bladder), acute abdomen with signs of intra-abdominal bleeding allows to suspect an increment during placenta previa before delivery. To exclude placental ingrowth at the stage of outpatient follow-up of a pregnant woman, ultrasound with Dopplerometry is the method of choice. Ultrasound data serve as an indication for MRI in the II–III trimester of pregnancy. Additional examination methods are necessary to determine the scope and tactics of surgery, predict blood loss and possible complications during surgery.

Perhaps the most important ultrasonographic association of placenta accreta spectrum in the second and third trimesters is the presence of placenta previa, which is present in more than 80% of accretas in most large series. Other gray-scale abnormalities that are associated with placenta accreta spectrum include multiple vascular lacunae within the placenta, loss of the normal hypoechoic zone between the placenta and myometrium, decreased retroplacental myometrial thickness (less than 1 mm), abnormalities of the uterine serosa–bladder interface, and extension of placenta into myometrium, serosa, or bladder.

The use of color flow Doppler imaging may facilitate the diagnosis. Turbulent lacunar blood flow is the most common finding of placenta accreta spectrum on color flow Doppler imaging. Other Doppler findings of placenta accreta diapason include increased subplacental vascularity, gaps in myometrial blood inflow, and vessels bridging the placenta to the uterine periphery.

Treatment

Until recently, planned hysterectomy during cesarean section was considered the only method of resolving this obstetric situation [7]. The rapid development of endovascular surgery allows the doctor not only to control and minimize intraoperative blood loss, but also to avoid hysterectomy, preserving the reproductive function of a woman.

The modern method of labor management with placenta accretion is reflected in detail in the works of Angstmann T. et al. [11] and Kurtzer M.A. [10]. The authors propose the following scheme:

1. Before surgery, install occlusive balloon catheters in the common iliac arteries.
2. Prepare blood preparations for transfusion: CSF, erythrocyte mass, platelet mass.
3. Against the background of general combined anesthesia, perform a median laparotomy with a bypass of the navel on the left.
4. Classical caesarean section in the upper segment of the uterus (bottom caesarean section).
5. Extraction of the child.

6. Balloon occlusion of the common iliac arteries under X-ray control or selective EMA (in the absence of a choice of these methods - bilateral ligation a. iliaca interna).
7. Ligation of the umbilical cord and its immersion into the uterine cavity.
8. Suturing the incision with a continuous double-row suture.
9. Excision of altered sections of the uterine wall with the placenta within the intact myometrium, as well as scar-altered, thinned uterine wall.
10. Applying a double-row seam to the incision in the lower uterine segment.
11. The second way to complete the operation is possible: to leave the placenta in situ with its further expansion and subsequent curettage of the uterine cavity (against the background of antibiotic therapy).

Summary

1. Placenta accretion is a potentially life–threatening condition; it will be manageable, if ultrasound and MRI examinations are carried out in a timely manner, prediction and selection of optimal surgical tactics.
2. The modern method of labor management in pregnant women with placenta accretion is the use of organ–preserving technologies: intravascular balloon occlusion of the common iliac arteries, selective embolization of the uterine arteries. It can be assumed that this method in the near future may become a safe alternative to obstetric surgery-hysterectomy, which allows avoiding numerous complications associated with this operation.
3. The success of intensive therapy for massive bleeding depends on the coordinated work of the obstetric hospital: obstetricians, gynecologists, anesthesiologists, endovascular surgeons, transfusiologists.

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