MODERN ASPECTS OF PREDICTION AND EARLY DIAGNOSIS OF CEREBROVASCULAR DISORDERS AND INDICATORS OF THE HEMOSTASIS SYSTEM IN PREGNANT WOMEN WITH PREECLAMPSIA

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Annotation

Preeclampsia (PE) occupies a leading position in the structure of pathology during pregnancy, due to the lack of early and reliable diagnostic criteria, effective prevention and treatment measures. Preeclampsia is a systemic, multi-organ endotheliopathy that affects the kidneys, heart, liver, and brain.Preeclampsia (PE) is a serious medical and social problem throughout the world, as it remains one of the main causes of perinatal and maternal mortality. In accordance with the goals and objectives of the work, a survey of 140 women will be conducted. The scientific search program will be implemented on the basis of the Bukhara Perinatal Center and the Maternity Complex of the Bukhara region, together with the Department of Obstetrics and Gynecology №2 of the Bukhara State Medical Institute.

Keywords: Preeclampsia, early preeclampsia, risk factors,arterial hypertension, cerebrovascular diseases, hypoxic-ischemic encephalopathy, ischemic and hemorrhagic stroke and cerebral venous sinus thrombosis.

«СОВРЕМЕННЫЕ АСПЕКТЫ ПРОГНОЗИРОВАНИЯ И РАННЕЙ ДИАГНОСТИКИЦЕРЕБРО- ВАСКУЛЯРНЫХ НАРУШЕНИЙ И ПОКАЗАТЕЛИ СИСТЕМЫ ГЕМОСТАЗА У БЕРЕМЕННЫХ С ПРЕЭКЛАМПСИЕЙ»

Аннотация

Преэклампсия (ПЭ) занимает лидирующие позиции в структуре патологии во время беременности, что объясняется отсутствием ранних и достоверных диагностических критериев, действенных мер профилактики и лечения. Преэклампсия — это системная, мультиорганная эндотелиопатия, поражающая почки, сердце, печень и мозг.В соответствии с целями и задачами работы будет проведено обследование 140 женщин. Программа научного поиска будет осуществлена на базе Бухарского перинатального центра и родильного

комплекса Бухарского района, совместно с кафедрой акушерства и гинекологии №2 Бухарского государственного медицинского института.

Ключевые слова: Преэклампсия, ранняя преэклампсия, факторы риска,артериальная гипертензия, цереброваскулярные заболевания, гипоксическо- ишемической энцефалопатии, ишемический и геморрагический инсульт и тромбоз церебральных венозных синусов.

PREEKLAMPSIYA BILAN OG'RIGAN HOMILADOR AYOLLARDA MIYA QON-TOMIR KASALLIKLARINI BASHORAT QILISH VA ERTA TASHXISLASHNING ZAMONAVIY JIHATLARI VA GEMOSTAZ TIZIMINING KO'RSATKICHLARI

Annotatsiya

Preeklampsiya (PE) homiladorlik davrida patologiya tarkibida yetakchi o'rinni egallaydi, buning sababi erta va ishonchli diagnostika mezonlari, samarali profilaktika va davolash choralari yo'qligidir. Preeklampsiya - buyraklar, yurak, jigar va miyaga ta'sir qiluvchi tizimli, ko'p organli endoteliopatiya. Preeklampsiya (PE) butun dunyoda jiddiy tibbiy-ijtimoiy muammo bo'lib, perinatal va onalar o'limining asosiy sabablaridan biri bo'lib qolmoqda.Ishning maqsad va vazifalariga muvofiq 140 nafar ayol o'rtasida so'rov o'tkaziladi. Ilmiy izlanish dasturi Buxoro perinatal markazi va Buxoro viloyati tug'ruq majmuasi negizida Buxoro davlat tibbiyot institutining №2 sonli akusherlik va ginekologiya kafedrasi bilan birgalikda amalga oshiriladi.

Kalit so'zlar: preeklampsiya, erta preeklampsiya, xavf omillari,arterial gipertenziya, serebrovaskulyar kasalliklar, gipoksik-ishemik ensefalopatiya, ishemik va gemorragik insult va miya venoz sinus trombozi.

Introduction

Currently, preeclampsia is one of the most urgent problems of modern obstetrics, due to its wide prevalence, the complexity of etiopathogenesis, the lack of early and reliable measures for prevention and treatment, the high rate of maternal and perinatal morbidity and mortality, and the economic costs of their treatment.

Recently, ideas about the heterogeneous nature of PE have expanded significantly. Early and late onset PE, recurrent and non-recurrent forms, forms with severe and moderate course, with fetal growth retardation (FGR) and without FGR, with

proteinuria and without proteinuria, with extremely high blood pressure are actively discussed [14].

Preeclampsia, especially its severe forms, is characterized by transcendent disorders of all types of metabolic processes, clinically manifested by multiple organ failure, including impaired brain function (ChandraV., KimJ.J., 2016).

The data of multicenter studies made it possible to identify risk factors for the development of PE: first pregnancy, multiple pregnancy, aggravated family history, chronic arterial hypertension (CH), diabetes mellitus, chronic kidney disease, use of assisted reproductive technologies, intragravid interval of 10 years or more, age >35 years, history of PE, antiphospholipid syndrome (APS).

What symptoms may indicate the development of preeclampsia?

High Blood Pressure - Blood pressure readings are 140/90 mmHg. Art. or higher. If systolic (upper) or diastolic (lower) blood pressure rises by 30 mm Hg. Art. or more, then such an increase cannot be ignored.

Protein in urine - 300 mg in urine collected over 24 hours, or +1 value in a rapid test. Swelling of the arms, legs, or face, especially under the eyes, or if the swelling leaves a depression in the skin when pressed. Edema can occur in all pregnant women and is generally harmless, but rapidly developing edema should be taken into account.

Headache that does not go away after taking pain medication.

Visual disturbances - double vision or blurred vision, dots or flashes before the eyes, auras.

Nausea or pain in the upper abdomen - these symptoms are often mistaken for indigestion or gallbladder pain. Nausea in the second half of pregnancy is not normal. Sudden weight gain - 2 kg or more per week. The mother's cerebral vasculature is very vulnerable to the side effects of preeclampsia.

Short-term and long-term cerebrovascular complications include posterior reversible encephalopathy syndrome, reversible cerebral vasoconstriction syndrome, hemorrhagic and ischemic stroke, damage to small cerebral vessels, and vascular dementia (M.A. Sabantsev, S.V. Shramko, 2021).

Cerebrovascular disease is the leading cause of maternal death in women with pulmonary embolism (PE), with most deaths due to intracerebral hemorrhage. According to US statistics, in 7.4% of maternal mortality, its main cause was maternal stroke in the period 2016-2020, and this was directly related to an increase in the incidence of severe forms of preeclampsia (M.A. Sabantsev, S.V. Shramko, 2021).

Acute cerebrovascular disorders, including ischemic and hemorrhagic stroke and thrombosis of the cerebral venous sinuses, are formidable complications of preeclampsia that can lead to permanent maternal disability or death, and the overall

risk of pregnancy-related cerebrovascular disease is approximately 30 per 100,000 births.

Preeclampsia and eclampsia are associated with an increased risk of maternal death in the United States and abroad. An analysis of data between 2006 and 2010 found that preeclampsia and eclampsia are associated with 4.8% and 4.1% of maternal deaths in the United States. In addition, preeclampsia and eclampsia may have directly contributed to maternal mortality in this study and were associated with CNS disease (6.2%) and cardiovascular disease (14.6%). Hypertensive disorders during pregnancy are the leading cause of maternal death in Latin America and the Caribbean.

Monitoring of the most important indicators of the mother's systemic hemodynamics and her cerebral blood flow, the determination of hemostasiological and inflammatory markers with sufficient credibility reveals preclinical manifestations of the suffering of blood circulation in the brain of pregnant women and creates the possibility of predicting outcomes and orienting in the results of therapy.

On the basis of the above conducted modern informative methods, new opportunities are being created to consider this problem of obstetrics - the tactics of management, the choice of adequate therapy and the term of delivery as the main lever for reducing HIE and disability in women of active reproductive age.

The Purpose of the Study

To evaluate the role of hemodynamic, inflammatory, hemostatic markers and MRI data in the prediction and early diagnosis of hypoxic-ischemic encephalopathy and to study the parameters of the hemostasis system in pregnant women with moderate and severe PE, their significance in the choice of obstetric tactics.

Material and Methods

In accordance with the goals and objectives of the work, a survey of 140 women will be conducted. The scientific search program will be implemented on the basis of the Bukhara Perinatal Center and the Maternity Complex of the Bukhara region, together with the Department of Obstetrics and Gynecology No. 2 of the Bukhara State Medical Institute.

Results and Discussion

Pathogenetically substantiated approaches to the search for reliable markers of preeclampsia prognosis at the earliest stage of its development are considered. The role of the microbiota of the female body, the features of immunological and pro-

inflammatory processes in the probable genesis of preeclampsia has been proven. In accordance with the goals and objectives of the work, a survey of 140 women will be conducted. The scientific search program will be implemented on the basis of the Bukhara Perinatal Center and the Maternity Complex of the Bukhara region, together with the Department of Obstetrics and Gynecology No. 2 of the Bukhara State Medical Institute. Common laboratory and instrumental methods of diagnostics and hemocoagulation system will be carried out (fibrinogen, platelets, PI, APTT, D-dimer), clinical and biochemical analyzes (CRP, complete blood count, urine),

Of the functional diagnostic methods, dopplerometry of the carotid artery and MRI will be used.

Retrospectively, 80 birth histories and puerperas who were diagnosed with severe preeclampsia complicated by multiple organ failure will be studied in order to determine the risk group for fatal complications of gestation. Depending on the presence/absence of a gestational complication of PE and its severity, the following groups were identified: group 1 (control) - 20 women whose pregnancy was not complicated by the development of PE; group 2 - 30 pregnant women with moderate PE; group 3 - 30 patients with severe PE.

An in-depth study will be conducted on a cohort of 90 women. including 33% of patients with a physiological course of pregnancy and childbirth (1st control group), the main prospective group will be 67% of patients, of which 33% of pregnant women registered at the end of the second trimester of pregnancy did not receive appropriate preventive therapy (2nd group) and the 3rd group will be made up of patients who were registered from early pregnancy and underwent a comprehensive study in a timely manner and received therapy aimed at preventing hypoxic-ischemic brain damage. Biochemical blood changes underlie the pathogenesis of these complications.

Bibliography

1. Bushtyreva I.O., Kurochka M.P., Gaida O.V. Prognostic criteria for preeclampsia // Russian Bulletin of the Obstetrician-Gynecologist. 2017. No. 4. pp. 59–63.

2. Dolgushina V.F., Syundyukova E.G., Chulkov V.S. Assessment of the significance of the PIERS clinical predictive model for predicting adverse pregnancy outcomes in preeclampsia // Journal of the International Scientific School "Paradigm". 2015. No. 7. pp. 100–105.

3. Kostenko I.V., Olenko E.S., Kodochigova A.I., Sushkova N.V., Subbotina V.G., Delinikaitis E.G. The possibility of developing preeclampsia in clinically healthy women // Bulletin of the Medical Institute "Reaviz". 2017. No. 1. pp. 73–78.

4. Lakhno I.V. Modern possibilities for predicting and preventing preeclampsia. Women's health. 2016. No. 7. pp. 44–48.

5. Lemeshevskaya T.V., Pribushenya O.V. Possibilities of early prediction of preeclampsia by markers of combined prenatal screening of the first trimester of pregnancy // Modern perinatal medical technologies in solving the problems of demographic safety. 2015. No. 8. pp. 85–90.

6. WHO recommendations for the prevention and treatment of preeclampsia and eclampsia. - Geneva, 2014. - 48 p.

7. Implementation of the Critical Case Analysis cycle in obstetric practice at the hospital level. – WHO Regional Office for Europe. - Copenhagen, 2017. - 104 p.

8. Naderi S., Tsai S.A., Khandelwal A. Hypertensive Disorders of Pregnancy // Curr. Atheroscler. Rep. - 2017. - No. 19 (3). – R. 15. doi: 10.1007/s11883-017-0648-z.

9. Fingar K.R., Mabry-Hernandez I., Ngo-Metzger Q., et al. Delivery Hospitalizations Involving Preeclampsia and Eclampsia, 2005–2014: Statistical Brief #222. Source Healthcare Cost and Utilization Project (HCUP) Statistical Briefs [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2006-2017 Apr. - 26 p.m.

10. El Farra J., Bean C., Martin J.N. Jr. Management of Hypertensive Crisis for the Obstetrician/Gynecologist // Obstet. Gynecol. Clin. North. Am. - 2016. - No. 43 (4). - R. 623-637. doi: 10.1016/j. ogc.2016.07.005.

11. Sibai, B., Dekker, G. and Kupferminc, M. (2005) Pre-Eclampsia. The Lancet, 365, 785-799. The Social Conditions in the Genesis of Preeclampsia.

12. Chandra V., Kim J.J., Benbrook D.M., Dwivedi A., Rai R. Therapeutic options for management of endometrial hyperplasia. Journal of Gynecologic Oncology.

13. Russian Bulletin of an obstetrician-gynecologist. M.A. Sabantsev, S.V. Shramko, 2021.

14. Khodjaeva Z.S., Kholin A.M., Vikhlyaeva E.M. Early and late preeclampsia: pathobiology paradigms and clinical practice // Obstetrics and Gynecology. 2013. No. 10. P. 4–11.

15. ChandraV., KimJ.J., 2016.Obstetrics and gynecology.

16. Hypertensive disorders during pregnancy, childbirth and the postpartum period. Preeclampsia. Eclampsia: Clinical guidelines (treatment protocol). Moscow, 2016. 72 p.

17. Ulyanina E.V., Fatkullin I.F., Khairullina G.R. Markers of angiogenesis and ultrasound in assessing the severity of fetal growth retardation syndrome // Bulletin of modern clinical medicine. - 2016. - Vol. 9, no. 5. - S. 79-82.