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ОЦЕНИТЬ ЭФФЕКТИВНОСТЬ МЕСТНОГО ПРИМЕНЕНИЯ ИМБИРЯ ПРИ ЛЕЧЕНИИ ТОШНОТЫ И РВОТЫ ВО ВРЕМЯ БЕРЕМЕННОСТИ

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Резюме:

Актуальность. Тошнота и рвота во время беременности - одно из наиболее распространенных состояний во время беременности, обычно они начинаются между 4 и 6 неделями беременности и достигают своего пика примерно на 10 неделе. Тошнота и рвота встречается у 85-90% всех беременных женщин и считается серьезной проблемой во время беременности. Имбирь содержит горькие на вкус соединения шогаол и гингерол, а в ходе доклинических и клинических исследований было доказано, что гингерол-6 и шогаол-6 обладают противорвотным действием и используются для лечения желудочно-кишечных расстройств.

Цель исследования: Оценить факторы риска возникновения тошноты и рвоты во время беременности в местных регионах. Оценить эффективность местного препарата с имбирем (*Zingiber officinale*) в составе комплексной терапии при лечении тошноты и рвоты во время беременности

Материалы и методы: В исследовании приняли участие 80 беременных женщин. Срок беременности составил 6-13 недель. Средний возраст беременных женщин составил 25 лет (19-30 лет). Женщины были случайным образом разделены на 2 группы. 1-я группа была контрольной, в нее вошли 30 женщин, а во вторую группу - группу лечения - вошли 50 женщин. Были использованы описательная статистика, критерий χ^2 , однофакторный дисперсионный анализ и многомерный логистический регрессионный анализ.

Результаты и выводы. В соответствии с образом жизни населения и спецификой условий жизни и климата, основными факторами риска тошноты и рвоты во время беременности у женщин являются факторы, приводящие к дефицитным состояниям в организме, а именно низкий уровень предгравидарной подготовки (5 и 8% соответственно) и короткий межгенетический интервал. (14 и 15 месяцев соответственно). Кроме того, у женщин было обнаружено наличие кисты желтого тела. (13,33% и 25% соответственно). У женщин, которые применяли имбирь для местного применения, наблюдалось значительное улучшение качества жизни и значительное уменьшение продолжительности тошноты (общее количество рвотных масс с 11 до 5,5). Это открытие позволяет предположить, что имбирь местного применения эффективен в снижении тошноты и рвоты при использовании в составе комплексной схемы лечения по сравнению с контрольной группой.

Ключевые слова: тошнота и рвота при беременности, PUQE-24, имбирь, киста желтого тела.

EVALUATE THE EFFECTIVENESS OF TOPICAL GINGER APPLICATION IN THE TREATMENT OF NAUSEA AND VOMITING DURING PREGNANCY

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Abstract

Relevance Nausea and vomiting of pregnancy (NVP) is one of the most common conditions of pregnancy, usually begin between 4 and 6 weeks of gestation and peak at around 10 weeks.[2] NVP occurs in 85–90% of all pregnant women and considered to be very significant issue of pregnancy. Ginger contains the bitter-tasting compounds shogaol and gingerol, and gingerol-6 and shogaol-6 have been shown to have antiemetic effects in preclinical and clinical studies and have been used to treat gastrointestinal disorders.

The purpose of project: To assess the risk factors for nausea and vomiting during pregnancy (NVP) in local environment. To assess the effectiveness of a local ginger (*Zingiber officinale*) preparation as part of complex therapy in the treatment of NVP.

Materials and methods: 80 pregnant women were recruited for the study. The gestation period was 6-13 weeks. The average age of pregnant women was 25 years (19-30 years). Women were randomly divided into 2 groups. Group 1 was the control group, 30 women were enrolled and second group is treatment group included 50 women. Descriptive statistics, χ^2 test, one-way ANOVA, and multivariate logistic regression analysis were used.

Conclusions: According to the lifestyle of the population and the specifics of living conditions and climate, the main risk factors for nausea and vomiting of pregnancy among women are factors leading to deficiency states in the body, namely, a low level of pregravid preparation (5 and 8%, respectively) and a short intergenetic interval (14 and 15 months, respectively). In addition, the presence of a corpus luteum cyst in women was found. (13.33% and 25%, respectively). Women who used the ginger topical application had a significant improvement in quality of life and a significant decrease in the duration of nausea (PUQE sum from 11 to 5.5). This finding suggests that topical ginger is effective in reducing nausea and vomiting when used as part of a comprehensive treatment regimen compared to the control group

Key words: nausea and vomiting of pregnancy. PUQE-24, ginger, corpus luteum cyst

Introduction. Nausea and vomiting of pregnancy (NVP) is one of the most common conditions of pregnancy, usually presenting in early pregnancy and characterized by nausea, and vomiting.[1] These symptoms often begin between 4 and 6 weeks of gestation and peak at around 10 weeks.[2] Although NVP persists for most women until about 16 weeks, approximately 10–24% of cases may persist throughout pregnancy. NVP occurs in 85–90% of all pregnant women and considered to be very significant issue of pregnancy. [1,2] NVP can significantly impact a pregnant woman's quality of life and lead to negative physical and psychological consequences.[3] This syndrome causes general weakness and fatigue, leading to exhaustion and dehydration of the body, which in turn affects the daily lifestyle and professional work activities, causing psychological problems such as depression and anxiety in women.[4]

Ginger (*Zingiber officinale*) roots have been used since ancient times to treat gastrointestinal disorders. Ginger contains the bitter-tasting compounds shogaol and gingerol, and gingerol-6 and shogaol-6 have been shown to have antiemetic effects in preclinical and clinical studies [5]. Ginger has been recognized as safe for consumption by the US Food and Drug Administration. [6]. There are various oral preparations of ginger, such as capsules, tinctures, and candies, but the because of bitter taste of ginger pregnant women finds it difficult to take orally, especially during pregnancy nausea and vomiting Therefore, it is important to evaluate the efficacy and safety of parenteral preparations of this plant.

Currently, different medicines are widely used to treat nausea and vomiting. However, there is much debate about the safety and effectiveness of drugs used in pregnancy. Therefore, it is currently important to develop non-pharmacological, safe methods of treating nausea and vomiting of pregnant women.

The purpose of project: To assess the risk factors for nausea and vomiting during pregnancy (NVP) in local environment. To assess the effectiveness of a local ginger (*Zingiber officinale*) preparation as part of complex therapy in the treatment of NVP.

Object and methods: The study was conducted among pregnant women who applied to the outpatient family clinic No. 3 in the Chartak district of the Namangan region. 80 pregnant women were recruited for the study. The gestation period was 6-13 weeks. The average age of pregnant women was 25 years (19-30 years). Women with mild and moderate nausea and vomiting were engaged in project. Women with severe vomiting, risk of pregnancy complications, as well as chronic diseases - hypertension, bronchial asthma, diabetes mellitus, and pre-existing disorders of the gastrointestinal system and liver and biliary tract were not recruited for the experiment. Women were randomly divided into 2 groups. Group 1 was the control group, 30 women were enrolled and second group is treatment group included 50 women.

These women were recommended to take light and easily digestible foods in small portions and doxylamine succinate/pyridoxine hydrochloride 10 mg/10 mg as medical treatment according to the national protocol of the Republic of Uzbekistan.[7] The PuQE-24 scale [8] was used to assess the level of nausea and vomiting and monitor its dynamics (Table 1).

Table 1

| | | | | | |
|--|----------------|---------------|---------------|---------------|--------------|
| In the last 24 hours, for how long have you felt nauseated or sick to your stomach? | Not at all (1) | ≤1 h (2) | 2-3 h (3) | 4-6 h (4) | >6 h (5) |
| In the last 24 hours, have you vomited or thrown up? | Zero (1) | 1-2 times (2) | 3-4 times (3) | 5-6 times (2) | ≥7 times (5) |
| In the last 24 hours, how many times have you had retching or dry heaves without bringing anything up? | Zero (1) | 1-2 times (2) | 3-4 times (3) | 5-6 times (2) | ≥7 times (5) |

A literature-based questionnaire was also used to assess risk factors nausea and vomiting in pregnant women[9,10]. (Table 2)

Table 2

| | | |
|-----------|---|--|
| 1 | Gestational weeks | |
| 2 | Parity | Number of births: ____ Number of abortions |
| 3 | Did you experience nausea and vomiting in your previous pregnancies? | 1. Yes 2. No If yes, what kind of treatment did you receive? |
| 4 | Have any of your family members (mother, sister) had nausea and vomiting during pregnancy? | 3. Yes 4. No |
| 5 | Did you take folic acid at least 1 month before pregnancy? | 5. Yes 6. No |
| 6 | Do you experience nausea while traveling in transport? | 7. Yes 8. No |
| 7 | Do you engage in light physical exercise in your daily life? How many steps do you walk on average per day? | Write |
| 8 | Your pre-pregnancy weight Your current weight Your height | ○ ____ kg ○ ____ kg. ○ ____ cm |
| 9 | Do you have anemic condition? Write you hemoglobin level Have you taken iron supplements? | 9. Yes 10. No ○ I don't know |
| 10 | Has multiple gestation, trophoblastic disease, or jaundice been detected in the current pregnancy? | 11. Yes 12. No ○ I don't know |
| 11 | At what week of pregnancy did the symptoms of nausea and vomiting begin? | |
| 12 | Have you been diagnosed with a corpus luteum cyst during pregnancy? | 13. Yes 14. No ○ I don't know |
| 13 | Have you taken ginger orally (in the form of | ○ Yes |

| | | |
|----|--|--|
| | capsules, tea, candy)? ○ If yes, what was the approximate dosage? ○ Anti-nausea efficacy | ○ No Not effective ○ Somewhat effective ○ Moderately effective ○ Very effective) |
| 14 | What symptoms bother you during pregnancy that you didn't have before? Write | |

Pregnant women were also taught how to make local compresses from ginger preparations. For this, it was recommended to grind ginger root, wrap it in a bandage and apply it to the inner wrist for 10-15 minutes 3 times a day as an addition to complex treatment.

The results were evaluated for 7 days. Women were explained how to fill out the PUQE-24 scale every day. The results were statistically evaluated.

Results and their analysis. The results of the questionnaire on the identification of nausea and risk factors in the conditions of Uzbekistan are presented in the table 3

Table 3

| № | Risk factor | Control group (30 women) | Treatment group (60 women) |
|----|---|-----------------------------|-------------------------------|
| 1 | Age | 25±3 | 23±3 |
| 2 | Paritet | 3±1 | 2±1 |
| 3 | Onset of symptoms (week) | 9±2 | 10±2 |
| 4 | The proportion of women who experienced nausea and vomiting (%) | 33,33 | 27 |
| 5 | The proportion of women who has family history of nausea and vomiting during pregnancy (mother, sister) (%) | 30 | 25 |
| 6 | Percentage of women who took pre-pregnancy preparation (folic acid) (%) | 5 | 8 |
| 7 | Inter-genetic interval (in months) | 15 | 14 |
| 8 | Proportion of women with seasickness (%) | 16,67 | 18.33 |
| 9 | Average Hemoglobin Level (%) | 85 | 88 |
| 10 | The presence of yol sac cyst (according to 1 st ultrasound result) (%) | 13,33 | 25 |
| 11 | Number of women with liver and biliary tract obstruction (according to ultrasound) (%) | 46,67 | 41.67 |
| 12 | Percentage of people who used ginger preparations before (%) | 6.67 | 10 |
| 13 | Other pregnancy-related conditions | | |
| | Pain and itching in the wrist area (%) | 30 | 38,33 |
| | Hemorrhoids (%) | 36,67 | 28,33 |
| | Constipation (%) | 43,33 | 41,67 |
| | Varicose of veins (%) | 23,33 | 25 |

PUQE-24 Scale Results

The results of the PUQE-24 scale in the control group over 7 days are shown in Table 4.

Table 4

| | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | Day 6 | Day |
|-----------------|-------|-------|-------|-------|-------|-------|-----|
| Treatment group | 11 | 8,33 | 7,8 | 7,3 | 6,6 | 6,1 | 5,5 |
| Control group | 9,8 | 9,5 | 9 | 8,8 | 8,6 | 8 | 7,6 |

Conclusions. According to the lifestyle of the population and the specifics of living conditions and climate, the main risk factors for nausea and vomiting of pregnancy among women are factors leading to deficiency states in the body, namely, a low level of pregravid preparation (5 and 8%, respectively) and a short intergenetic interval (14 and 15 months, respectively) and the resulting anemia (hemoglobin levels on average 85 and 88). In addition, the presence of a corpus luteum cyst in women was found. (13.33% and 25%, respectively). This may cause increased production of progesterone and increased symptoms of nausea and vomiting. Also. Genetic factors and were assessed to be of significant importance. Women who used the ginger preparation locally had a significant improvement in quality of life and a significant decrease in the duration of nausea (PUQE sum from 11 to 5.5). This finding suggests that topical ginger is effective in reducing nausea and vomiting when used as part of a comprehensive treatment regimen compared to the control group. Women in the treatment group also reported a reduction in wrist stiffness, further supporting the benefits of ginger.

List of used literature:

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