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ЕЖЕМЕСЯЧНЫЙ НАУЧНЫЙ ЖУРНАЛ

Медицинские новости Грузии

საქართველოს სამედიცინო სიახლენი

GEORGIAN MEDICAL NEWS

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GMN: Georgian Medical News is peer-reviewed, published monthly journal committed to promoting the science and art of medicine and the betterment of public health, published by the GMN Editorial Board since 1994. GMN carries original scientific articles on medicine, biology and pharmacy, which are of experimental, theoretical and practical character; publishes original research, reviews, commentaries, editorials, essays, medical news, and correspondence in English and Russian.

GMN is indexed in MEDLINE, SCOPUS, PubMed and VINITI Russian Academy of Sciences. The full text content is available through EBSCO databases.

GMN: Медицинские новости Грузии - ежемесячный рецензируемый научный журнал, издаётся Редакционной коллегией с 1994 года на русском и английском языках в целях поддержки медицинской науки и улучшения здравоохранения. В журнале публикуются оригинальные научные статьи в области медицины, биологии и фармации, статьи обзорного характера, научные сообщения, новости медицины и здравоохранения. Журнал индексируется в MEDLINE, отражён в базе данных SCOPUS, PubMed и ВИНИТИ РАН. Полнотекстовые статьи журнала доступны через БД EBSCO.

GMN: Georgian Medical News – საქართველოს სამედიცინო სიახლენი – არის ყოველთვიური სამეცნიერო სამედიცინო რეცენზირებადი ჟურნალი, გამოიცემა 1994 წლიდან, წარმოადგენს სარედაქციო კოლეგიისა და აშშ-ის მეცნიერების, განათლების, ინდუსტრიის, ხელოვნებისა და ბუნებისმეტყველების საერთაშორისო აკადემიის ერთობლივ გამოცემას. GMN-ში რუსულ და ინგლისურ ენებზე ქვეყნდება ექსპერიმენტული, თეორიული და პრაქტიკული ხასიათის ორიგინალური სამეცნიერო სტატიები მედიცინის, ბიოლოგიისა და ფარმაციის სფეროში, მიმოხილვითი ხასიათის სტატიები.

ჟურნალი ინდექსირებულია MEDLINE-ის საერთაშორისო სისტემაში, ასახულია SCOPUS-ის, PubMed-ის და ВИНИТИ РАН-ის მონაცემთა ბაზებში. სტატიების სრული ტექსტი ხელმისაწვდომია EBSCO-ს მონაცემთა ბაზებიდან.

WEBSITE

www.geomednews.com

К СВЕДЕНИЮ АВТОРОВ!

При направлении статьи в редакцию необходимо соблюдать следующие правила:

1. Статья должна быть представлена в двух экземплярах, на русском или английском языках, напечатанная через **полтора интервала на одной стороне стандартного листа с шириной левого поля в три сантиметра**. Используемый компьютерный шрифт для текста на русском и английском языках - **Times New Roman** (**Кириллица**), для текста на грузинском языке следует использовать **AcadNusx.** Размер шрифта - **12**. К рукописи, напечатанной на компьютере, должен быть приложен CD со статьей.

2. Размер статьи должен быть не менее десяти и не более двадцати страниц машинописи, включая указатель литературы и резюме на английском, русском и грузинском языках.

3. В статье должны быть освещены актуальность данного материала, методы и результаты исследования и их обсуждение.

При представлении в печать научных экспериментальных работ авторы должны указывать вид и количество экспериментальных животных, применявшиеся методы обезболивания и усыпления (в ходе острых опытов).

4. К статье должны быть приложены краткое (на полстраницы) резюме на английском, русском и грузинском языках (включающее следующие разделы: цель исследования, материал и методы, результаты и заключение) и список ключевых слов (key words).

5. Таблицы необходимо представлять в печатной форме. Фотокопии не принимаются. **Все цифровые, итоговые и процентные данные в таблицах должны соответствовать таковым в тексте статьи**. Таблицы и графики должны быть озаглавлены.

6. Фотографии должны быть контрастными, фотокопии с рентгенограмм - в позитивном изображении. Рисунки, чертежи и диаграммы следует озаглавить, пронумеровать и вставить в соответствующее место текста **в tiff формате**.

В подписях к микрофотографиям следует указывать степень увеличения через окуляр или объектив и метод окраски или импрегнации срезов.

7. Фамилии отечественных авторов приводятся в оригинальной транскрипции.

8. При оформлении и направлении статей в журнал МНГ просим авторов соблюдать правила, изложенные в «Единых требованиях к рукописям, представляемым в биомедицинские журналы», принятых Международным комитетом редакторов медицинских журналов - http://www.spinesurgery.ru/files/publish.pdf и http://www.nlm.nih.gov/bsd/uniform_requirements.html
В конце каждой оригинальной статьи приводится библиографический список. В список литературы включаются все материалы, на которые имеются ссылки в тексте. Список составляется в алфавитном порядке и нумеруется. Литературный источник приводится на языке оригинала. В списке литературы сначала приводятся работы, написанные знаками грузинского алфавита, затем кириллицей и латиницей. Ссылки на цитируемые работы в тексте статьи даются в квадратных скобках в виде номера, соответствующего номеру данной работы в списке литературы. Большинство цитированных источников должны быть за последние 5-7 лет.

9. Для получения права на публикацию статья должна иметь от руководителя работы или учреждения визу и сопроводительное отношение, написанные или напечатанные на бланке и заверенные подписью и печатью.

10. В конце статьи должны быть подписи всех авторов, полностью приведены их фамилии, имена и отчества, указаны служебный и домашний номера телефонов и адреса или иные координаты. Количество авторов (соавторов) не должно превышать пяти человек.

11. Редакция оставляет за собой право сокращать и исправлять статьи. Корректура авторам не высылается, вся работа и сверка проводится по авторскому оригиналу.

12. Недопустимо направление в редакцию работ, представленных к печати в иных издательствах или опубликованных в других изданиях.

При нарушении указанных правил статьи не рассматриваются.

REQUIREMENTS

Please note, materials submitted to the Editorial Office Staff are supposed to meet the following requirements:

1. Articles must be provided with a double copy, in English or Russian languages and typed or compu-ter-printed on a single side of standard typing paper, with the left margin of **3** centimeters width, and **1.5** spacing between the lines, typeface - **Times New Roman** (**Cyrillic**), print size - **12** (referring to Georgian and Russian materials). With computer-printed texts please enclose a CD carrying the same file titled with Latin symbols.

2. Size of the article, including index and resume in English, Russian and Georgian languages must be at least 10 pages and not exceed the limit of 20 pages of typed or computer-printed text.

3. Submitted material must include a coverage of a topical subject, research methods, results, and review.

Authors of the scientific-research works must indicate the number of experimental biological species drawn in, list the employed methods of anesthetization and soporific means used during acute tests.

4. Articles must have a short (half page) abstract in English, Russian and Georgian (including the following sections: aim of study, material and methods, results and conclusions) and a list of key words.

5. Tables must be presented in an original typed or computer-printed form, instead of a photocopied version. **Numbers, totals, percentile data on the tables must coincide with those in the texts of the articles.** Tables and graphs must be headed.

6. Photographs are required to be contrasted and must be submitted with doubles. Please number each photograph with a pencil on its back, indicate author's name, title of the article (short version), and mark out its top and bottom parts. Drawings must be accurate, drafts and diagrams drawn in Indian ink (or black ink). Photocopies of the X-ray photographs must be presented in a positive image in **tiff format**.

Accurately numbered subtitles for each illustration must be listed on a separate sheet of paper. In the subtitles for the microphotographs please indicate the ocular and objective lens magnification power, method of coloring or impregnation of the microscopic sections (preparations).

7. Please indicate last names, first and middle initials of the native authors, present names and initials of the foreign authors in the transcription of the original language, enclose in parenthesis corresponding number under which the author is listed in the reference materials.

8. Please follow guidance offered to authors by The International Committee of Medical Journal Editors guidance in its Uniform Requirements for Manuscripts Submitted to Biomedical Journals publication available online at: http://www.nlm.nih.gov/bsd/uniform_requirements.html
http://www.icmje.org/urm_full.pdf
In GMN style for each work cited in the text, a bibliographic reference is given, and this is located at the end of the article under the title "References". All references cited in the text must be listed. The list of references should be arranged alphabetically and then numbered. References are numbered in the text [numbers in square brackets] and in the reference list and numbers are repeated throughout the text as needed. The bibliographic description is given in the language of publication (citations in Georgian script are followed by Cyrillic and Latin).

9. To obtain the rights of publication articles must be accompanied by a visa from the project instructor or the establishment, where the work has been performed, and a reference letter, both written or typed on a special signed form, certified by a stamp or a seal.

10. Articles must be signed by all of the authors at the end, and they must be provided with a list of full names, office and home phone numbers and addresses or other non-office locations where the authors could be reached. The number of the authors (co-authors) must not exceed the limit of 5 people.

11. Editorial Staff reserves the rights to cut down in size and correct the articles. Proof-sheets are not sent out to the authors. The entire editorial and collation work is performed according to the author's original text.

12. Sending in the works that have already been assigned to the press by other Editorial Staffs or have been printed by other publishers is not permissible.

Articles that Fail to Meet the Aforementioned Requirements are not Assigned to be Reviewed.

ავტორთა საყურადღებოდ!

რედაქციაში სტატიის წარმოდგენისას საჭიროა დავიცვათ შემდეგი წესები:

1. სტატია უნდა წარმოადგინოთ 2 ცალად, რუსულ ან ინგლისურ ენებზე,დაბეჭდილი სტანდარტული ფურცლის 1 გვერდზე, 3 სმ სიგანის მარცხენა ველისა და სტრიქონებს შორის 1,5 ინტერვალის დაცვით. გამოყენებული კომპიუტერული შრიფტი რუსულ და ინგლისურენოვან ტექსტებში - **Times New Roman (Кириллица)**, ხოლო ქართულენოვან ტექსტში საჭიროა გამოვიყენოთ **AcadNusx.** შრიფტის ზომა – 12. სტატიას თან უნდა ახლდეს CD სტატიით.

2. სტატიის მოცულობა არ უნდა შეადგენდეს 10 გვერდზე ნაკლებს და 20 გვერდზე მეტს ლიტერატურის სიის და რეზიუმეების (ინგლისურ, რუსულ და ქართულ ენებზე) ჩათვლით.

3. სტატიაში საჭიროა გაშუქდეს: საკითხის აქტუალობა; კვლევის მიზანი; საკვლევი მასალა და გამოყენებული მეთოდები; მიღებული შედეგები და მათი განსჯა. ექსპერიმენტული ხასიათის სტატიების წარმოდგენისას ავტორებმა უნდა მიუთითონ საექსპერიმენტო ცხოველების სახეობა და რაოდენობა; გაუტკივარებისა და დაძინების მეთოდები (მწვავე ცდების პირობებში).

4. სტატიას თან უნდა ახლდეს რეზიუმე ინგლისურ, რუსულ და ქართულ ენებზე არანაკლებ ნახევარი გვერდის მოცულობისა (სათაურის, ავტორების, დაწესებულების მითითებით და უნდა შეიცავდეს შემდეგ განყოფილებებს: მიზანი, მასალა და მეთოდები, შედეგები და დასკვნები; ტექსტუალური ნაწილი არ უნდა იყოს 15 სტრიქონზე ნაკლები) და საკვანძო სიტყვების ჩამონათვალი (key words).

5. ცხრილები საჭიროა წარმოადგინოთ ნაბეჭდი სახით. ყველა ციფრული, შემაჯამებელი და პროცენტული მონაცემები უნდა შეესაბამებოდეს ტექსტში მოყვანილს.

6. ფოტოსურათები უნდა იყოს კონტრასტული; სურათები, ნახაზები, დიაგრამები - დასათაურებული, დანომრილი და სათანადო ადგილას ჩასმული. რენტგენოგრამების ფოტოასლები წარმოადგინეთ პოზიტიური გამოსახულებით **tiff** ფორმატში. მიკროფოტოსურათების წარწერებში საჭიროა მიუთითოთ ოკულარის ან ობიექტივის საშუალებით გადიდების ხარისხი, ანათალების შეღებვის ან იმპრეგნაციის მეთოდი და აღნიშნოთ სურათის ზედა და ქვედა ნაწილები.

7. სამამულო ავტორების გვარები სტატიაში აღინიშნება ინიციალების თანდართვით, უცხოურისა – უცხოური ტრანსკრიპციით.

8. სტატიას თან უნდა ახლდეს ავტორის მიერ გამოყენებული სამამულო და უცხოური შრომების ბიბლიოგრაფიული სია (ბოლო 5-8 წლის სიღრმით). ანბანური წყობით წარმოდგენილ ბიბლიოგრაფიულ სიაში მიუთითეთ ჯერ სამამულო, შემდეგ უცხოელი ავტორები (გვარი, ინიციალები, სტატიის სათაური, ჟურნალის დასახელება, გამოცემის ადგილი, წელი, ჟურნალის №, პირველი და ბოლო გვერდები). მონოგრაფიის შემთხვევაში მიუთითეთ გამოცემის წელი, ადგილი და გვერდების საერთო რაოდენობა. ტექსტში კვადრატულ ფჩხილებში უნდა მიუთითოთ ავტორის შესაბამისი N ლიტერატურის სიის მიხედვით. მიზანშეწონილია, რომ ციტირებული წყაროების უმეტესი ნაწილი იყოს 5-6 წლის სიღრმის.

9. სტატიას თან უნდა ახლდეს: ა) დაწესებულების ან სამეცნიერო ხელმძღვანელის წარდგინება, დამოწმებული ხელმოწერითა და ბეჭდით; ბ) დარგის სპეციალისტის დამოწმებული რეცენზია, რომელშიც მითითებული იქნება საკითხის აქტუალობა, მასალის საკმაობა, მეთოდის სანდოობა, შედეგების სამეცნიერო-პრაქტიკული მნიშვნელობა.

10. სტატიის ბოლოს საჭიროა ყველა ავტორის ხელმოწერა, რომელთა რაოდენობა არ უნდა აღემატებოდეს 5-ს.

11. რედაქცია იტოვებს უფლებას შეასწოროს სტატია. ტექსტზე მუშაობა და შეჯერება ხდება საავტორო ორიგინალის მიხედვით.

12. დაუშვებელია რედაქციაში ისეთი სტატიის წარდგენა, რომელიც დასაბეჭდად წარდგენილი იყო სხვა რედაქციაში ან გამოქვეყნებული იყო სხვა გამოცემებში.

აღნიშნული წესების დარღვევის შემთხვევაში სტატიები არ განიხილება.

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PREVALENCE OF PRETERM DELIVERY AMONG WOMEN WHO RECEIVE PROGESTERONE SUPPLEMENTATION DURING PREGNANCY: CROSS-SECTIONAL OBSERVATIONAL STUDY

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Abstract.

Background and objectives: Preterm birth (PTB) is defined as birth before 37 completed weeks of gestation. It is generally agreed, preterm delivery is the most important obstetrical complication leading to perinatal morbidity and mortality. The main aim of this study is to assess the prevalence of progesterone prescription, the route of administration, the prevalence of PTB, and the route of delivery as well as to look at the rates of PTB among those who received progesterone and those who did not. **Methods:** An observational cross-sectional study among postpartum women was done between April and September 2023. A convenience sample of 300 women were interviewed at maternity hospitals and primary health centers in Duhok. A survey of postpartum women up to 1 year postpartum was completed. Patients were questioned about basic pregnancy information, risk factors, and complications, as well as the use (if any) of progesterone.

Result: The preterm birth (<37 week) rate is 12%. From the 300 patients in the sample, 114 (38%) women had history of single or multiple progesterone therapies. The most common single route of progesterone therapy was the parenteral route (29.8%), but more patients received progesterone via multiple routes (32.4%). Pre-term birth was reported in 19 women who received progesterone treatment compared to 17 women among those who did not receive progesterone treatment. No statistically significant variations were found between the two groups (P=0.08). **Conclusion:** There were no statistically significant differences in prevalence of PTB or route of delivery between women who received progesterone supplementation and those who did not receive progesterone (P=0.08 and P= 0.14 respectively). Prior research has shown that the clearest evidence of benefit for progesterone in pregnancy is among those with short cervix. Perhaps the lack of significant difference found in this study was because of prescriptions outside of established indications. More randomized controlled trials are needed to assess the effects of progesterone supplementation during pregnancy.

Key words. Preterm birth, progesterone in pregnancy, antenatal care, obstetric complications.

Introduction.

Preterm birth (PTB) is defined as birth before 37 completed weeks of gestation. It is generally agreed, preterm delivery is the most important obstetrical complication leading to perinatal morbidity and mortality [1-3]. About 70% of neonatal deaths and 25-50% of cases of long–term neurological impairment in children is a result of PTB [2,3]. In developed countries, the prevalence of PTB is about 5-12% of all deliveries, and one-third of these occur before 34 completed weeks of gestation. The prevalence in developing countries is higher [3]. For example, the rate of PTB is as high as 18% in certain African countries [4,5]. There has been an increase in the incidence of PTB over the last decade [3]. The mechanism responsible for preterm labor is unknown. Concurrent obstetrical risk factors like placental abruption, placenta previa, multiple gestation, hypertensive disorders, and intrauterine growth restriction (IUGR) are identifiable only in 40% of cases, while the remaining cases are idiopathic [3,4]. The first published randomized controlled trial to study the effect of progesterone on the prevention of PTB among women at increased risk was published in 1970 [1,4]. During pregnancy, the uterus remains quiescent, and the cervix remains long and closed. Although the exact mechanisms that lead to spontaneous PTB are not fully understood, the terminal pathways that are common to term labor are likely activated prematurely. “Progesterone is the most researched prophylactic agent, yet there is a lack of consistency in the prevention of PTB and improvement in neonatal outcomes” [4,5]. In Duhok city, progesterone supplementation is commonly prescribed during pregnancy for many reasons [6-11]. Commonly, women with no history of PTB and unknown cervical length are prescribed progesterone during pregnancy. This research aims to better understand the reasons for prescribing progesterone and some of the pregnancy outcomes among those who received it. The incidence of progesterone prescribing, the route of administration, the prevalence of preterm birth, and the route of delivery were assessed among a sample of women in Duhok. Perhaps these findings can help to prevent the unnecessary use of progesterone in low-risk women and also ensure the appropriate prescribing of progesterone to prevent PTB.

Patient and Methods.

An observational cross-sectional study was carried out between April and September 2023. Women were interviewed at the following centers: Azadi Teaching Hospital, Duhok Maternity Hospital, Shehidan Family Medicine Center, Zanest Family Medicine Center, and Gulan Hospital. A convenience sample of 300 women were interviewed after obtaining informed consent and a survey was completed for each participant. Participants were selected from among those inpatients in the postpartum department as well as from the primary health care centers when they brought their children in for vaccinations (only mothers of children less than 1 year were included). Women were not included if they had a spontaneous abortion or intrauterine fetal death during the pregnancy question, declined to participate, or were not competent to give informed consent. Women were also not included if they were more than 1 year postpartum or nulliparous. The interviews were conducted over a period of 6 months. The participants were interviewed by asking them the following details after explaining and obtaining informed consent: Demographics: Patients were asked their age, gravidity,

parity, number of abortions, and gestational age in weeks at delivery. Progesterone: They were questioned if they received any medication during their pregnancy, and particularly if they received progesterone supplementation. Medications were confirmed either by looking at photos of prescribed medications or by examining medications they brought with them from home. If they used progesterone, they were asked in which trimester, the route of administration (orally, vaginally, parenterally), and any presenting risk factors. They were also asked why the doctor prescribed the progesterone. Delivery: all participants were asked about the timing of delivery (as noted above), the route of delivery, and any complications during pregnancy or after delivery.

Results.

Data from the interviews was compiled and analyzed using the SPSS program.

1. Age distribution of the study population: The age range of the participants was 14 - 42 years with a mean age ± SD of 29.12 ± 5.78 years. Around half of participants (49.3%) were 20-29 years whereas pregnant women who were less than 20 years and 40 years or more constituted only 3.0% each. The age distribution of the study sample is shown in Table 1.

2. Parity, abortion history, and gestational age of studied pregnant women: The range of parity of pregnant women was 1-10 children with a mean parity ± SD of 2.8 ± 1.60 (median 2, mode 2). A total of 67 (22.3%) pregnant women had one child compared to 44 (14.7%) women who had more than four children.

Out of the total 300 studied women, 232 (77.3%) had no history of previous abortion and 68 (22.7%) had a history of at least one abortion prior to the pregnancy in question. History of multiple abortions (three or more spontaneous abortions) was reported in only 13 (4.3%) studied women.

The range of completed gestational age of studied women was 28-42 weeks with the mean gestational age of ± SD of 37.83 ± 1.6. The proportion of women with pre-term deliveries was 12.0%.

3. History of progesterone therapy: Out of the total 300 studied women, 114 (38.0%) women had history of single or multiple progesterone therapies.

3.1. Time of progesterone administration: Out of the total 114 women with a history of progesterone administration, 67 (58.8%) women received progesterone only in the first trimester of pregnancy compared to 11 (9.6%) receiving progesterone only in the second trimester. The proportion of women who had a history of progesterone administration in more than one trimester was 31.6%. Details of progesterone therapy by trimester of pregnancy are shown in Table 3.

3.2. Route of administration of progesterone: The most common route of progesterone therapy during pregnancy was the parenteral route (all given intramuscularly) in 34 (29.8%) women compared to the vaginal route used in only 11 (9.6%) women. 32 (28.1%) women were administered progesterone orally. 37 (32.4%) women received progesterone concurrently via more than one of these routes. (Table 3)

Progesterone therapy by presenting risk factors: The most common presenting risk factor in women treated with progesterone was complaints of abdominal pain in 41 (36.0%) women. Details of presenting risk factors among women treated with progesterone are shown in Table 3.

Table 1. *Age distribution of studied pregnant women (n=300).*

Age group (years)	No. (%)
14-19 years	9 (3.0)
20-29 years	148 (49.3)
30-39 years	134 (44.7)
40 years or more	9 (3.0)
Total	**300 (100.0)**

Table 2. *Parity, abortion history and completed gestational age of the studied women (n=300).*

Variable	**No. (%)**
Parity	
Para 1	67 (22.3)
Para 2-4	189 (63.0)
Para more than 4	44 (14.7)
Abortion	
No history of abortion	232 (77.3)
History of 1-2 abortions	55 (18.3)
History of multiple abortions	13 (4.3)
Gestational age	
Pre-term (< 37 weeks)	36 (12.0)
Term (37-41 weeks)	263 (87.7)
Post-term (42 weeks and beyond)	1 (0.3)

Table 3. *Progesterone therapy by the time of administration, route of administration, and presenting risk factors among women treated with progesterone (n=114).*

Variable	**No. (%)**
Time of progesterone administration	
First trimester	67 (58.8)
Second trimester	11 (9.6)
More than one trimester	36 (31.6)
Route of progesterone administration	
Oral route	32 (28.1)
Vaginal route	11 (9.6)
Parenteral route	34 (29.8)
Multiple routes	37 (32.4)
Presenting risk factor	
Abdominal pain (uterine contractions)	41 (36.0)
Vaginal bleeding	23 (20.2)
Backache	3 (2.6)
Low level placenta	11 (9.6)
Previous abortion	18 (15.8)
Preterm delivery	1 (0.9)
Others	17 (14.9)

4. Type of delivery: Out of the total 300 studied women, 113 (37.7%) women gave birth by normal vaginal delivery compared to 187 (62.3%) by cesarean section. No statistically significant variations in the type of delivery were found between women who received progesterone and those who did not receive progesterone (P=0.14), as seen in Table 4.

5. Complications during or after pregnancy: There were 230 (76.7%) women who had no complications and 70

Table 4. *Comparison of type of delivery between women who received progesterone therapy and those who did not (n=300).*

Progesterone administration	**Type of delivery**			**P-value**
	Normal vaginal delivery	**Cesarean section**	**Total**	
Yes	37	77	114	$\chi^2 = 2.1$ (*P = 0.14*)
No	76	110	186	
Total	**113 (37.7%)**	**187 (62.3%)**	**300 (100.0%)**	

Table 5. *Comparison of complication development between women who received progesterone and those who did not receive progesterone (n=70).*

Progesterone administration	**Type of complication**						**P-value**	
	Polyhydramnios	Oligohydramnios	Diabetes mellitus	Hypertension	Thyroid disease	Others	**Total**	
Yes	2	3	4	5	1	13	**28**	Fishers Exact=5.1 (*P = 0.37*)
No	0	4	8	14	1	15	**42**	
Total (% of Total 300)	**2 (0.7)**	**7 (2.3)**	**12 (4.0)**	**19 (6.3)**	**2 (0.7)**	**28 (9.3)**	**70 (23.3)**	

Table 6. *Comparison of gestational age between women who received progesterone and those who did not receive progesterone (n=300).*

Progesterone administration	**Gestational age**				**P-value**
	Pre-term	Term	Post-term	**Total**	
Yes	19	95	0	**114**	Fishers Exact = 4.2 (*P = 0.08*)
No	17	168	1	**186**	
Total	**36**	**263**	**1**	**300**	

(23.3%) who did have complications. The number of women who had complications in the group that received progesterone therapy was 28 compared to 42 in the group that did not receive progesterone therapy. However, this difference in the total number of complications was not statistically significant (P=0.37), as shown in Table 5. P-values were also calculated for each individual type of complication and no significant difference was found between the progesterone and no progesterone groups.

6. Gestational age by progesterone administration: Preterm delivery was reported in 19 women who received progesterone treatment compared to 17 women among those who did not receive progesterone treatment. No statistically significant variations were found between women who received progesterone treatment and those who did not, as seen in Table 6. The proportion of women with preterm delivery was 12% of the whole, and 87% were term delivery.

Discussion.

The present use of prophylactic progesterone is founded on the supposition that PTB is on account of progestin reduction that can be corrected by progesterone supplementations [13]. In women who have a history of PTB, many studies demonstrate a significant risk reduction in PTB among women who receive progesterone [3,5]. In the current study, results were approaching significance in difference in PTB rates between the two groups (those who received progesterone and those who did not) (P=0.08). The difference showed that those who did not have progesterone had a higher rate of term delivery. It is possible that those who did not receive progesterone were overall lower risk.

In the current study, there was no difference in PTB rates between those who received progesterone and those who did not. It raises questions about the locally observed indications for progesterone supplementation. It also raises the possibility that there were confounding factors such as a significantly higher baseline risk for PTB among those who received progesterone supplementation. This should be factored into future study design.

Prior research has shown that the clearest evidence of the benefit of progesterone for the prevention of PTB is among those with short cervix [1,14]. Somes studies proposed that vaginal progestin prophylaxis started during the second trimester reduces the risk for PTB [3]. Some trials established that prophylaxis with weekly intramuscular injection of 17 hydroxyprogesterone caproate(17HPC) during the second trimester may lower PTB risk in women with history PTB [15].

In this study, there was no significant difference in complication rates between those receiving or not receiving progesterone. Perhaps the lack of significant difference in complications found in this study was because of prescriptions outside of established indications. According to the survey results, there were no statistically significant variations in route of delivery between women who received progesterone supplementation and those who did not receive progesterone (P= 0.14 respectively). It is significant to note that both groups had higher rates of caesarean delivery compared to vaginal delivery. This raises the question of whether our sample was very skewed or the local obstetric practice favors caesarean delivery [16].

One of the limitations of this study is that it is based on survey data and actual diagnoses could not be verified. A prospective observational study or randomized controlled trial in Duhok would give better information as to whether progesterone in pregnancy would prevent PTB in high-risk pregnancies for indications other than those already researched. One possible area for further study is among patients presenting with “abdominal pain” (found to be uterine contractions) since that was the top stated reason in this study for progesterone supplementation.

Conclusion.

The current study showed 12% of women had PTB regardless of the type of delivery. The results didn’t show any significant difference in PTB rates between those who received progesterone and those who did not. In Duhok, conclusive evidence is still lacking for many of the current indications used by local prescribers. There is a high prevalence of progesterone prescription in pregnancy in Duhok. The concept of progesterone therapy to prevent PTB is not a new one. More study is needed in

order to understand the route of administration and indications for administration that will be most contributory to decreasing PTB rates.

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