

ASSOCIATED FACTORS AND OUTCOMES OF THREATENED MISCARRIAGE IN PREGNANT WOMEN AT THAI BINH OBSTETRICS AND GYNECOLOGY HOSPITAL FROM 2022 TO 2023

ABSTRACT

Nguyen Van Hien^{1*}, Nguyen Trung Kien¹, Bui Minh Tien¹

Objective: Evaluation of Treatment Outcomes for Threatened Miscarriage up to 12 Weeks at Thai Binh Obstetrics and Gynecology Hospital in the Years 2022-2023.

Method: A cross-sectional study was conducted on 260 pregnant women diagnosed with threatened abortion and treated at Thai Binh Maternity Hospital from January 1, 2022, to June 30, 2023.

Results: The results indicated a treatment success rate of 86.5%, with various protocols applied, primarily involving hormone therapy combined with tocolysis. Notably, the analysis of treatment outcomes by maternal age revealed no significant differences between patients aged ≤ 35 years and those aged > 35 years ($p > 0.05$). However, while maternal age did not show a statistically significant impact on treatment outcomes, some studies suggest it may still be a potential risk factor for complications. Additionally, the presence of subchorionic fluid was assessed, showing that 57.3% of patients had this condition. Although the treatment success rate was slightly higher in patients without subchorionic fluid (90.1% vs. 83.9%), no statistically significant relationship was established ($p > 0.05$). These findings imply that neither maternal age nor the presence of subchorionic fluid significantly affects treatment outcomes for threatened abortion, highlighting the effectiveness of medical interventions regardless of these factors.

Conclusion: Although the group of pregnant women over 35 years old and patients with subchorionic fluid had a higher rate of treatment failure, no significant association was identified. This indicates that these factors do not significantly affect treatment outcomes.

Keywords: *threatened abortion, severe obstetric history, Thai Binh Obstetrics and Gynecology Hospital.*

1. Thai Binh University of Medicine and Pharmacy

*Corresponding Author: Nguyễn Văn Hiền

Email: bsnguyenhienart@gmail.com

Received date: 01/11/2024

Revised date: 11/12/2024

Accepted date: 13/12/2024

I. INTRODUCTION

To ensure the birth of a healthy baby, mothers must navigate various risks throughout the 9-month and 10-day gestation period. One critical issue that demands special attention is threatened miscarriage. This condition not only impacts the health of the pregnant woman but also significantly affects her mental well-being, her family's stability, and the overall quality of the population.

Miscarriage is defined as the termination of pregnancy before 22 weeks of gestation or when the fetus weighs less than 500 grams. It typically unfolds in two stages: threatened miscarriage and actual miscarriage. During the threatened miscarriage stage, the gestational sac has not yet detached from the uterine lining, and with prompt treatment, the chances of continuing the pregnancy are quite high. However, threatened miscarriage is characterized by symptoms that pose a risk to the fetus's life, especially in the early stages of pregnancy (under 12 weeks).

Investigating the clinical and paraclinical manifestations of threatened miscarriage is crucial. This research not only aids in the early identification of risks but also enables healthcare providers to implement timely interventions, thus supporting a normal pregnancy and safeguarding the health of the mother. Each year, Thai Binh Obstetrics and Gynecology Hospital treats numerous patients with threatened miscarriage. However, it is important to note that there is currently no published data regarding whether treatment outcomes are affected by maternal age or the presence of subchorionic fluid. This gap in knowledge highlights the need for further research to clarify these factors in relation to treatment efficacy.

II. SUBJECTS AND METHODS

2.1 Subjects, Duration, and Location of the Study

Subjects: The study focused on pregnant women diagnosed with threatened abortion and treated at Thai Binh Maternity Hospital, meeting the following criteria:

Inclusion Criteria:

Pregnant with a viable fetus in the uterine cavity.

Gestational age calculated from the first day of the last menstrual period if the cycle is regular (28-30 days) or based on ultrasound in the first trimester.

Diagnosed with threatened abortion.

Exclusion Criteria:

Cases not meeting the inclusion criteria.

Cases currently experiencing miscarriage.

Cases of bleeding in pregnancy due to other causes: missed abortion, molar pregnancy, ectopic pregnancy, etc.

Duration and Location: From January 1, 2022, to June 30, 2023, at Thai Binh Maternity Hospital.

2.2 Research Methods

2.2.1 Study Design

Descriptive cross-sectional study.

2.2.2 Sample Size

Apply the formula for calculating sample size to estimate a proportion using absolute error:

$$n = Z_{(1-\alpha/2)}^2 \frac{p(1-p)}{d^2}$$

p: set at 0.2 according to author Lê Thị Anh Đào [1].

d: desired margin of error, set at 0.05.

Calculated sample size n=245 patients.

(In this study, we obtained 260 patients)

2.2.3 Research Procedure

Each subject was interviewed, examined, and underwent tests according to a standardized medical record template.

2.2.4 Data Entry and Processing

Data were collected and processed using SPSS 20.0 with medical statistical tests.

2.3 Ethical Considerations

The study was approved by the Scientific Council under Decision No. 1444/QĐ-YDTB.

III. RESEARCH RESULTS



Figure 1. Treatment Outcomes

Among the 260 patients treated for threatened miscarriage at the hospital, 225 cases were successfully treated, accounting for a rate of 86.5%.

Table 1. Treatment protocol for patients

Treatment Protocol	Quantity	Percentage (%)
Tocolysis	20	7.7
Hormones + Tocolysis	218	83.8
Tocolysis + Hormones + Antibiotics	18	6.9
Tocolysis + Cervical Cerclage + Antibiotics	4	1.5
Total	260	100

Comments: The protocol using tocolysis and hormones accounted for the highest percentage at 83.8%, followed by tocolysis at 7.7%, with cervical cerclage being the least used protocol.

Table 2. Treatment Outcomes by Maternal Age

Results	Maternal Age ≤ 35		Maternal Age > 35		p > 0,05
	Quantity	Percentage (%)	Quantity	Percentage (%)	
Recovered	200	86,6	25	86,2	p > 0,05
Failure	31	13,4	04	13,8	
Total	231	100	29	100	

There is no significant difference in treatment outcomes between the two maternal age groups (≤ 35 years and > 35 years). Therefore, it can be concluded that maternal age does not significantly affect treatment outcomes.

Table 3. Distribution of Patients with subchorionic fluid on Ultrasound

Ultrasound Findings	Quantity	Percentage (%)
Normal	111	42.7
subchorionic fluid	149	57.3
Total	260	100

Comments: Among the patients with threatened miscarriage, 149 patients (accounting for 57.3%) were found to have subchorionic fluid through ultrasound. Among those with vaginal bleeding, 183 individuals (accounting for 70.3%) also showed subchorionic fluid on ultrasound.

Table 4. Treatment Outcomes by method of conception

Outcome	Natural Conception		IUI + IVF Conception		p > 0,05
	Quantity	Percentage (%)	Quantity	Percentage (%)	
Cured	182	86,3	43	87,8	p > 0,05
Failure	29	13,7	06	12,2	
Total	211	100	49	100	

The success rate in patients who conceived through IUI and IVF is 87.8%, while the success rate for natural conception is 86.3%. The difference in success rates between these conception methods is not statistically significant p > 0,05.

Table 5. Treatment Outcomes by the Presence of Subchorionic Fluid

Outcome	With subchorionic		Without subchorionic		p > 0,05
	Quantity	Percentage (%)	Quantity	Percentage (%)	
Cured	100	90,1	125	83,9	p > 0,05
Failure	11	9,9	24	16,1	
Total	111	100	149	100	

Comment: The success rate of treatment in patients with ultrasound findings of subchorionic fluid is 83.9%, while this rate is higher in patients without subchorionic fluid, reaching 90.1%. But it shows no statistically significant relationship between subchorionic fluid and treatment outcomes, with p > 0.05.

IV. DISCUSSION

Our study results show that the success rate of treatment in the group of mothers under 35 years old is 86.6%, while the rate in the group over 35 is slightly lower at 86.2%. This difference is not statistically significant (p > 0.05), indicating that maternal age is not a determining factor in treatment outcomes. This means that mothers over 35 do not necessarily face a higher risk in the treatment of threatened miscarriage.

The study by Trần Xuân Cảnh (2014) [5] also noted that age does not significantly affect the success rate in the treatment of threatened miscarriage. This suggests that, although age may be a risk factor in some cases, it is not the decisive factor for the success of treatment. This is further supported by the research of Lê Thị Anh Đào (2022) [1] which emphasizes that timely medical care and intervention play a much more critical role than the mother’s age.

The advancement of modern medicine has provided many effective treatment methods for threatened miscarriage, allowing physicians to intervene early and proactively, regardless of the patient's age. Management and treatment of threatened miscarriage should be conducted in a coordinated and comprehensive manner, focusing on modifiable factors such as lifestyle, nutrition, and the psychological health of the mother.

The presence of subchorionic fluid is another factor studied in the context of threatened miscarriage. Results show that among 260 patients, 149 (57.3%) displayed signs of subchorionic fluid on ultrasound. The success rate of treatment in the group with fluid reached 90.1%, while in the group without fluid, it was 83.9%. Although there is a difference in success rates, there is no clear statistical relationship between subchorionic fluid and treatment outcomes ($p > 0.05$).

Soldo's study (2013) [3] indicated that subchorionic fluid may be associated with complications during pregnancy, but does not always lead to miscarriage. This suggests that while subchorionic fluid can be a warning factor, it is not a decisive factor for treatment success. Our study results indicate that patients with subchorionic fluid still have a high treatment success rate, opening new avenues for physicians in managing and treating threatened miscarriage.

Timely monitoring and intervention can help mitigate risks for the mother, regardless of the presence of fluid. This is crucial for establishing a comprehensive treatment plan for mothers, helping them feel more at ease during pregnancy. Additionally, psychological care and support play a significant role in improving treatment outcomes.

Besides maternal age and subchorionic fluid, other factors such as treatment methods also play an important role in enhancing success rates. According to our study results, the most common treatment method is the combination of tocolysis and hormones, accounting for 83.8% of all patients. This method shows high effectiveness in improving the condition of the mother.

Le Thi Huong's study (2014) [6] also demonstrated that early intervention and the use of appropriate treatment methods can significantly enhance the success rate in treating threatened miscarriage. This indicates that a professional and timely

medical care approach can improve outcomes for mothers, regardless of other risk factors.

Furthermore, the research by Lê Thị Anh Đào and Nguyễn Việt Tiến (2015) [4] on the effectiveness of aspirin and heparin in treating recurrent miscarriage has shown that applying effective treatment methods can improve outcomes for mothers experiencing threatened miscarriage, even in the presence of other risk factors such as age or subchorionic fluid.

CONCLUSION

Maternal age does not have a significant impact on treatment outcomes, although it may be a risk factor. Similarly, the presence of subchorionic hematoma does not show a clear relationship with treatment outcomes. However, monitoring through ultrasound is still very important during treatment to improve patient outcomes.

REFERENCES

1. **Le Thi Anh Dao. (2022).** Clinical characteristics of pregnant women with unexplained recurrent miscarriage carrying pathogenic methylenetetrahydrofolate reductase gene. *Vietnamese Journal of Medicine*, 508(2).
2. **Ministry of Health. (2015).** Decision No. 315/QĐ-BYT dated January 29, 2015 on issuing guidelines for the diagnosis and treatment of certain medical conditions.
3. **Soldo, V. (2013).** "Threatened miscarriage in the first trimester and retrochorial hematomas: sonographic evaluation and significance." *Clinical and Experimental Obstetrics & Gynecology*, 40(4): 548 - 550.
4. **La Thi Anh Dao, Nguyen Viet Tien. (2015).** Evaluation of the effectiveness of aspirin and low molecular weight heparin in the treatment of recurrent miscarriage due to antiphospholipid syndrome. *Journal of Obstetrics and Gynecology*, 13(3), 107 - 110.
5. **Tran Xuan Canh. (2014).** Study on the treatment outcomes of threatened miscarriage in the first trimester at Hanoi Obstetrics and Gynecology Hospital in 2014. Master's thesis. Hanoi Medical University.
6. **Le Thi Huong. (2014).** Treatment outcomes of threatened miscarriage ≤ 12 weeks at Thanh Hoa Obstetrics and Gynecology Hospital in 2013. *Journal of Obstetrics and Gynecology*, 12(2), 65 - 68.