EVALUATION OF THE EFFECTIVENESS OF LABOR INDUCTION WITH DINOPROSTONE IN PREGNANCIES AT ≥37 WEEKS OF GESTATION AT THAI BINH OBSTETRICS AND GYNECOLOGY HOSPITAL IN 2025

Tran Thi Len[1*], Nguyen Trung Kien[1], Nguyen Van Thanh[1], Pham Thi Thuy Duong[1]

ABSTRACT

Objective: To evaluate the effectiveness of labor induction using dinoprostone in pregnant women with a gestational age of ≥37 weeks at Thai Binh Obstetrics and Gynecology Hospital in 2025.

Methods: A retrospective descriptive observational study was conducted based on medical records of 169 pregnant women at ≥37 weeks of gestation who underwent labor induction with dinoprostone at Thai Binh Obstetrics and Gynecology Hospital from January 1, 2025, to December 31, 2025

Result: Baseline Characteristics: The mean maternal age was 28.41 ± 5.78 years, with nulliparous women accounting for 61.8%. Mean gestational age was 39.72 ± 0.97 weeks (max: 41 weeks 5 days). Maternal systemic comorbidities and birth weight averaged 15.4% and 3,131 ± 310.44 g, respectively. Most participants (93.5%) had a pre-induction Bishop score ≤ 4, and the leading indication for induction was post-term pregnancy (60.9%).

Induction Outcomes & Predictors: The overall success rate of labor induction was 82.2%. Success was significantly associated with parity (OR = 7.25; 95% CI: 2.14–24.6; p < 0.05) and fetal weight (birth weight < 3,500g increased success likelihood 9.75-fold; p < 0.05). Conversely, maternal age (p > 0.05) and pre-induction Bishop score (p > 0.05) showed no statistically significant association with outcomes.

Delivery & Safety Profiles: The vaginal delivery rate was 69.2%. The primary cause for post-induction cesarean section was failed induction (57.7%). The mean induction-to-delivery interval was 10.62 ± 6.6 hours. Complication rates included postpartum hemorrhage (6.5%) and postpartum infection (3.0%). Neonatal outcomes were favorable, with only 1.2% having a 5-minute Apgar score < 7 and zero maternal or neonatal mortality.

Conclusion: Vaginal dinoprostone can consider an effective and safe option for labor induction in term pregnancies requiring termination of pregnancy, particularly in cases with an unfavorable cervix.

Keywords: Labor induction; Dinoprostone.

I. INTRODUCTION

The global rate of cesarean section has been steadily increasing, rising from 21.1% in 2018 and projected to reach 28.5% by 2030. This upward trend is observed not only in high-income countries but also in low- and middle-income countries. Notably, in Southeast Asia, the cesarean section rate may reach as high as 63.4% [1]. The increasing cesarean delivery rate is associated with higher maternal and neonatal morbidity and mortality. Vietnam has also reported a high cesarean section rate, particularly in urban areas, exceeding the recommendations of the World Health Organization (WHO) [2]. In 2022, the cesarean section rate in Vietnam reached 37%.

Given the benefits of vaginal delivery and the risks associated with cesarean section—particularly concerning maternal health and future reproductive outcomes—selecting an effective and safe method of labor induction to increase the likelihood of vaginal birth is essential. This is especially important because most pregnant women requiring termination of pregnancy often present with an unfavorable cervix, which reduces the probability of successful vaginal delivery.

Globally, labor induction is a commonly performed obstetric intervention. According to the World Health Organization in 2011, a survey of more than 300,000 deliveries across 373 healthcare facilities in 24 countries reported a labor induction rate of 9.6% [3]. Various methods of labor induction are available, including pharmacological and mechanical approaches, each with its own advantages and disadvantages. The ultimate goal of labor induction is to promote cervical ripening and stimulate effective uterine contractions, leading to cervical effacement and dilation. Pharmacologic agents used for labor induction include Prostaglandin E1 (PGE1) and Prostaglandin E2

1. Thai Binh University of Medicine and Pharmacy
*Corresponding author: Tran Thi Len
email: tranlenytb@gmail.com
Received date: 04/3/2026
Revised date: 13/5/2026
Accepted date: 20/5/2026

(PGE2). Prostaglandin E2 has been considered an effective agent, with reported successful induction rates ranging from 83% to 96% [4].

Against this background, Thai Binh Obstetrics and Gynecology Hospital began implementing labor induction using Dinoprostone 10 mg (a Prostaglandin E2 preparation) in June 2024 to reduce the cesarean section rate. To evaluate the effectiveness of this method, we conducted a study entitled: "Evaluation of the Effectiveness of Labor Induction with Dinoprostone in Pregnant Women at ≥37 Weeks of Gestation at Thai Binh Obstetrics and Gynecology Hospital in 2025."

Study Objective: To evaluate the effectiveness of labor induction and identify factors associated with the success of this procedure using Dinoprostone in pregnant women with a gestational age of ≥37 weeks at Thai Binh Obstetrics and Gynecology Hospital in 2025.

II. SUBJECTS AND METHODS

2.1. Study population:

Inclusion Criteria:

- Pregnant women aged >18 years.
- Gestational age ≥37 weeks, confirmed by reliable last menstrual period (regular cycles
- Singleton pregnancy, vertex presentation.
- Clinically adequate pelvis.
- Pre-induction Bishop score assessed.
- Indication for labor induction.
- No evidence of fetal distress.

Exclusion Criteria:

- Unknown last menstrual period and lack of confirmatory first-trimester ultrasound (<12 weeks).
- Severe maternal medical conditions, including cardiovascular disease, hyperthyroidism, acute infection, psychiatric disorder,
- Contraindication to labor induction.
- Acute genital tract infection.
- Contraindication to Dinoprostone.
- Non-vertex presentation.

Criteria for Successful Labor Induction:

- Bishop score ≥7 or increased by ≥3 points within 24 hours of Propess insertion.
- Cervical dilation ≥3 cm.
- Adequate uterine contractions

Study location: Thai Binh Obstetrics and Gynecology Hospital.

Study time: From 01/01/2025 to 31/12/2025.

Study design: Retrospective observational descriptive study based on medical records

Sample Size and Sampling Method

The study applied a total population sampling method. A convenience sampling technique was used to collect all medical records during the study period that met the inclusion criteria and did not violate any exclusion criteria. After data collection, 169 eligible medical records were included in the final analysis.

Data were extracted from the medical records of eligible participants using a standardized data collection form.

2.2. Data analisis:

Data were cleaned prior to entry into the REDCap software system.

Data were coded, and access was restricted to authorized research team members only.

Statistical analysis was performed using SPSS version 20.0, The following statistical tests were applied: Independent T-test for continuous variables, and Fisher's Exact test for cases where the expected frequency in any cell was less than 5. Multivariable logistic regression analysis was used to identify factors associated with the outcome…

2.3. Research ethics:

The study was conducted after approval of the research protocol by the Scientific Review Board of Thai Binh University of Medicine and Pharmacy.

This was a cross-sectional descriptive study using data extracted from medical records only, without direct intervention; therefore, it did not affect patient health.

All collected data were used solely for research purposes and confidentiality was strictly maintained.

III. RESULTS

Table 1. Pre-induction Bishop Score (n = 169)

Bishop score	Number(n)	Percentage (%)
4	158	93.5
5-6	11	6.5
Total	169	100.0

A pre-induction Bishop score ≤4 accounted for 93.5% of the study population.

Table 2. Indications for Labor Induction (n = 169)

Indication	Number (n)	Percentage (%)
Post-term pregnancy	103	60.9
Premature rupture of membranes	41	24.3
Oligohydramnios	20	11.8
Fetal growth restriction	2	1.2
Gestational diabetes mellitus	1	0.6
Mild preeclampsia	1	0.6
Polyhydramnios	1	0.6
Total	**169**	**100.0**

The most common indication for labor induction was post-term pregnancy (60.9%), followed by premature rupture of membranes (24.3%) and oligohydramnios (11.8%).

Table 3. Success Rate of Labor Induction (n = 169).

Outcome	Number (n)	Percentage (%)
Succsesful	139	82.2
Failed	30	17.8
Total	**169**	**100.0**

The overall success rate of labor induction was 82.2%

Table 4. Factors Associated with Successful Labor Induction

Associated Factors	Labor Induction Outcome				
	Succesful n (%)	Failed n (%)	OR	CI 95%	p-value
Maternal age					
< 35 years	111 (81.6)	25 (18.4)	1.26	0.44–3.59	> 0.05
≥ 35 years	28 (84.8)	5 (15.2)			
Parity					
Nulliparous	77 (74.0)	27 (26.0)	7.25	2.14–24.6	<0.05
Multiparous	62 (95.4)	3 (4.6)			
Pre-labor Bishop score					
≤ 4	129 (82.2)	29 (17.8)	2.25	0.28–18.4	>0.05
5–6	10 (83.3)	1 (16.7)			
Birth weight					
< 3500 g	134 (85.9)	22 (14.1)	9.75	2.93 – 32.5	<0.05
≥ 3500 g	5 (38.5)	8 (61.5)			
Maternal systemic comorbidities					
Healthy	129 (90.2)	14 (9.8)	14.7	5.63 – 38.7	<0.05
With medical history	10 (38.5)	16 (61.5)			

Maternal age: No statistically significant association was found between maternal age and the success rate of labor induction (OR = 1.26; 95% CI: 0.44–3.59; p > 0.05).

Parity: A statistically significant difference was observed regarding parity (OR = 7.25; 95% CI: 2.14–24.6; p < 0.05), indicating that multiparous women had a higher likelihood of success.

Pre-induction Bishop score: There was no statistically significant difference in the success rate based on the pre-induction Bishop score (OR = 2.25; 95% CI: 0.28–18.4; p > 0.05). The lack of a significant association may be attributed to the small sample size in the group with Bishop scores of 5–6.

Fetal birth weight: Fetal weight showed a statistically significant association with the success of labor induction (OR = 9.75; 95% CI: 2.93–32.5; p < 0.05). Fetuses weighing < 3,500g were 9.75 times more likely to achieve successful induction compared to those weighing ≥ 3,500g.

Maternal systemic comorbidities: Maternal medical history was significantly associated with induction success (OR = 14.7; 95% CI: 5.63–38.7; p < 0.05). Healthy pregnant women were 14.7 times more likely to have a successful induction compared to those with systemic comorbidities.

Table 5. Mode of Delivery Following Labor Induction with Dinoprostone (n = 169)

Mode of Delivery	Number (n)	Percentage (%)
Cesarean section	52	30.8
Vaginal delivery	117	69.2
Total	**169**	**100.0**

The rate of vaginal delivery was high at 69.2%, whereas the cesarean section rate following labor induction was 30.8%.

Table 6. Indications for Cesarean Section After Labor Induction (n = 52)

Indication	Number (n)	Percentage (%)
Failed induction	30	57.7
Fetal distress	6	11.5
Placental abruption	1	1.9
Arrest of cervical dilation	9	17.3
Failure of fetal head descent	6	11.5
Uterine rupture	0	0.0
Total	**52**	**100.0**

The primary indication for cesarean section following labor induction was failed induction (57.7%), followed by arrest of cervical dilation (17.3%).

Table 7. Induction-to-Delivery Interval (n = 169)

Induction Duration	Number (n)	Percentage (%)
≤ 12 hours	121	71.6
12–24 hours	18	10.7
> 24 hours	30	17.8
Total	**169**	**100.0**

Mean induction time: 10.624 ± 6.6 hoursAn induction duration of 0–12 hours accounted for the highest proportion (71.6%). The mean induction-to-delivery interval was 10.624 ± 6.6 hours, with a minimum duration of 2 hours and a maximum of 26 hours.

Table 8. Maternal Outcomes Following Labor Induction (n = 169)

Maternal Postpartum Outcome	Number (n)	Percentage (%)
Uncomplicated postpartum course	153	90.5
Postpartum hemorrhage	11	6.5
Postpartum infection	5	3.0
Uterine rupture	0	0.0
Maternal death	0	0.0
Total	**169**	**100.0**

The rate of postpartum hemorrhage was 6.5%, and postpartum infection occurred in 3.0% of cases. No cases of uterine rupture or maternal mortality were recorded.

Table 9. Neonatal Outcomes (n = 169)

Neonatal Outcome	Number (n)	Percentage (%)
5-minute Apgar score < 7	2	1.2
5-minute Apgar score ≥ 7	167	98.8
Neonatal death	0	0.0
Total	**169**	**100.0**

A total of 98.8% of neonates had a 5-minute Apgar score ≥7, while 1.2% had a score <7. No cases of neonatal mortality were observed.

IV. DISCUSSION

In our study conducted in 2025 at Thai Binh Obstetrics and Gynecology Hospital, 169 eligible pregnant women were included in the final analysis. The mean pre-induction Bishop score of the study population was 2.68 ± 1.31. This result is comparable to the findings of Vu Dinh Hieu (2022), who reported a mean Bishop score of 2.66 ± 0.781 [5].

Cervical status is the most important factor in labor induction. When the cervix is unfavorable, labor is often prolonged, associated with increased complications and higher intervention rates. As labor approaches, the cervix undergoes biochemical and structural changes referred to as cervical ripening, which facilitate labor progression. The Bishop score is an objective tool used to assess cervical status prior to labor induction and to monitor labor progression. It is also an important criterion for evaluating the success of labor induction.

According to Table 2, the most common indication for labor induction in our study was post-term pregnancy (60.9%), followed by premature rupture of membranes (24.3%) and oligohydramnios (11.8%). These findings are consistent with other studies. For example, Vu Dinh Hieu (2022) reported that the primary indication for induction was post-term pregnancy (44.7%) and preeclampsia (26.3%), followed by fetal growth restriction and gestational diabetes mellitus (10.6%) [5]. Thus, post-term pregnancy remains the most frequent indication for labor induction in contemporary obstetric practice. According to the recommendations of the American College of Obstetricians and Gynecologists (ACOG) and the World Health Organization (WHO), pregnancies at ≥41 weeks are associated with increased risks of fetal distress, oligohydramnios, meconium aspiration, and perinatal mortality; therefore, labor induction is considered a proactive strategy to reduce these complications.

As shown in Table 3, the overall success rate of labor induction in our study was 82.2%, while the failure rate was 17.8%. To date, there is no universally accepted standard for defining successful labor induction. Two key factors influencing labor progression are effective uterine contractions and progressive cervical dilation and effacement. Most international studies use changes in the Bishop score as the primary criterion for evaluating induction success. Some authors define success as achieving a post-induction Bishop score ≥7 or an increase of ≥3 points compared to baseline.

In our study, the inclusion criterion was a Bishop score ≤6. Successful induction was defined as achieving a Bishop score ≥7. The dinoprostone insert was removed when active labor occurred, after 24 hours, or in cases of uterine tachysystole.

When compared with international studies, Daykan et al. (2018) [7] reported that the cervical ripening efficacy of vaginal Propess was 82.8%, using a favorable Bishop score threshold of ≥6.

Compared with domestic studies, the success rate of labor induction in our study (82.2%) is relatively comparable to those reported by other authors: Pham Chi Kong (2020) reported a success rate of 74.4% [6], Vu Dinh Hieu (2022) reported 89.5% [5], and Daykan et al. (2018) reported 82.8% [7]. The consistently high success rates across studies suggest that dinoprostone has a relatively high efficacy in labor induction. It is considered a highly effective pharmacologic agent for induction of labor, particularly in cases of post-term pregnancy.

As shown in Table 4, when evaluating maternal age as a factor associated with induction success, women aged ≥35 years had a slightly higher success rate (84.8%) compared with those aged <35 years (81.6%). However, this difference was not statistically significant (OR = 1.26; 95% CI: 0.44–3.59; p > 0.05). The wide confidence interval, which includes the value 1, indicates that maternal

age could not be confirmed as an independent predictor of induction success in this study.

From a physiological perspective, advanced maternal age is often associated with an increased risk of systemic comorbidities such as gestational diabetes mellitus, hypertension, and preeclampsia, which may indirectly increase the likelihood of cesarean delivery. However, older maternal age is also more frequently observed in multiparous women, whose prior cervical remodeling from previous deliveries may facilitate cervical ripening and labor progression.

According to the American College of Obstetricians and Gynecologists (ACOG), advanced maternal age is not considered a contraindication nor an independent predictor of failed labor induction in low-risk term pregnancies [8]. Therefore, our findings are consistent with the general trends reported in the literature.

Regarding parity, Table 4 shows that nulliparous women had a success rate of 74.0%, whereas multiparous women had a significantly higher success rate of 95.4%. Parity was significantly associated with induction success (OR = 7.25; 95% CI: 2.14–24.6; p < 0.05). This indicates that multiparous women were approximately seven times more likely to achieve successful labor induction compared with nulliparous women.

Physiologically, in multiparous women, the cervix has previously undergone dilation and effacement during prior deliveries, leading to more favorable cervical remodeling and a faster response to induction. This finding is consistent with previous studies. For example, Claire Marie (2022) reported that the rate of vaginal delivery after labor induction was significantly higher in multiparous women (81.1%) compared with nulliparous women (57.3%), with a statistically significant difference (p < 0.01) [9].

According to Table 4, evaluation of the association between pre-induction Bishop score and successful labor induction showed no statistically significant difference (OR = 2.25; 95% CI: 0.28–18.4; p > 0.05). This finding differs from several other studies. For example, Vu Dinh Hieu reported a significant association between Bishop score and induction success (OR = 7.21; 95% CI: 0.009–0.955; p < 0.05) [5]. According to the American College of Obstetricians and Gynecologists (ACOG), a low Bishop score is associated with prolonged labor and an increased risk of failed induction; however, its predictive value may vary depending on the study population and the induction method used [7].

Regarding fetal birth weight (Table 4), the group with a birth weight < 3,500g had a successful labor induction rate 9.75 times higher than the group ≥ 3,500g (61.5% vs. 14.1%), which was statistically significant (OR = 9.75; 95% CI: 2.953 – 32.5; p < 0.05). A fetal weight ≥ 3,500g markedly reduces the probability of success and is considered an unfavorable factor for vaginal delivery, which may be explained by an increased risk of cephalopelvic disproportion (CPD). Le Thi My Hanh (2021) also reported that a fetal birth weight ≥ 3,500g significantly increases the failure rate of labor induction [10].

Also in Table 4, healthy pregnant women had a successful induction rate 14.7 times higher than the group with systemic comorbidities (OR = 14.7; 95% CI: 5.63 – 38.7; p < 0.05). These findings suggest that maternal systemic diseases are unfavorable factors for the outcomes of labor induction.

In Table 5, the rate of vaginal delivery in our study was 69.2%, while the cesarean section rate following labor induction was 30.8%. Compared with other studies, our vaginal delivery rate was slightly lower. For instance, Vu Dinh Hieu reported a vaginal delivery rate of 71.1% and a cesarean section rate of 28.9% [5].

The differences observed may be attributed to the fact that our study was a retrospective case-series with a relatively small sample size; therefore, larger and more comprehensive studies are required for more accurate estimation of vaginal delivery rates. Another contributing factor to the lower vaginal delivery rate in our study may be that 15.4% of participants had systemic comorbidities.

Analysis of cesarean indications (Table 6) showed that 52 of 169 cases required cesarean delivery after induction with dinoprostone. The primary indication was failed induction (57.7%), indicating that failure of labor induction remains the leading cause of surgical intervention. This highlights the importance of appropriate patient selection, accurate assessment of the Bishop score, and careful monitoring of response to induction methods. Other indications included arrest of cervical dilation (17.3%), fetal distress (11.5%), and failure of fetal head descent (11.5%). Placental abruption, a severe but rare complication,

accounted for 1.9%. No cases of uterine rupture were recorded.

In comparison, Vu Dinh Hieu reported 11 cesarean deliveries among 38 cases (28.94%), of which failed induction accounted for 18.1%. The most common indication in that study was cephalopelvic disproportion (54.5%), followed by fetal distress during labor [5].

According to Table 7, the mean induction-to-delivery interval was 10.624 ± 6.603 hours. The shortest duration was 2 hours and the longest was 26 hours. The majority of women achieved successful induction within 0–12 hours (71.6%), while 17.8% required more than 24 hours. These findings indicate that most patients responded favorably to induction with dinoprostone and progressed to the active phase of labor within a relatively short period.

Compared with international studies, our induction duration tended to be shorter. Grobman et al. (2018) reported a mean induction time of approximately 16–18 hours, particularly longer in nulliparous women [11]. According to Practice Bulletin No. 107 of the American College of Obstetricians and Gynecologists (ACOG), subsequently updated, an induction duration of 12–18 hours should not be prematurely considered a failure [7]. The high proportion (71.6%) of successful inductions within 12 hours in our study may be explained by the relatively large proportion of multiparous women (38.5%), who generally exhibit more favorable cervical ripening and faster labor progression. Additionally, 6.5% of participants had a Bishop score of 5–6 at baseline, indicating a relatively favorable cervix.

However, 17.8% of cases required more than 24 hours of induction; these were primarily cases of failed induction. Review of medical records showed that most of these women had very low initial Bishop scores (1–2 points), reflecting markedly unfavorable cervical conditions.

Regarding maternal outcomes (Table 8), 90.5% of women had an uncomplicated postpartum course. Postpartum hemorrhage occurred in 6.5% of cases and postpartum infection in 3.0%. No cases of uterine rupture or maternal death were recorded. These findings suggest a high level of maternal safety associated with labor induction in our study.

Nevertheless, when compared with other reports, our complication rates were slightly higher. Vu Dinh Hieu reported a postpartum hemorrhage rate of 2.6% and no cases of uterine rupture, endometritis, or maternal mortality [5]. The higher rates of postpartum hemorrhage and infection in our study may be related to prolonged induction duration and cases of premature rupture of membranes. Importantly, no severe complications such as uterine rupture or maternal death were observed, indicating that the dosage and administration protocol of dinoprostone used in this study were both safe and effective, while also contributing to a reduction in cesarean section rates.

The Apgar score is a widely used and important measure of neonatal outcome after birth. A 5-minute Apgar score ≥7 is considered normal. As shown in Table 9, 98.8% of neonates had a 5-minute Apgar score ≥7, and only 1.2% had a score <7. No cases of neonatal mortality were recorded.

In our study, 2 of 169 neonates (1.2%) required active neonatal resuscitation. Both cases involved a double nuchal cord combined with prolonged second stage of labor (approximately 30 minutes). After resuscitation, both neonates achieved a 10-minute Apgar score of 9.

These findings differ slightly from those reported by Vu Dinh Hieu, who recorded no cases with Apgar <7 and no neonatal deaths; two neonates (2.17%) were admitted to the neonatal unit due to neonatal jaundice and maternal insulin-treated diabetes [5].

Overall, adverse neonatal outcomes in our study were infrequent and comparable to, or lower than, those reported in other studies. Therefore, although dinoprostone may be associated with certain adverse effects, its efficacy in achieving successful vaginal delivery is substantial. Dinoprostone should be considered for labor induction in low-risk term pregnancies, with careful patient selection and close maternal–fetal monitoring throughout the induction process to further minimize adverse outcomes.

V. CONCLUSION

Based on the analysis of the study results, we draw the following conclusions:

The primary indication for labor induction was post-term pregnancy (60.9%), followed by premature rupture of membranes (24.3%) and oligohydramnios (11.8%).

The overall success rate of labor induction was 82.2%, with a 69.2% vaginal delivery rate.

Parity: Multiparous women were significantly more likely to succeed (OR = 7.25; 95% CI: 2.14–24.6; p < 0.05).

Fetal Weight: Birth weight < 3,500g was strongly associated with success; these cases were 9.75 times more likely to achieve successful induction than those ≥ 3,500g (p < 0.05).

Maternal Health: Healthy women had a 14.7-fold higher success rate compared to those with systemic comorbidities (p < 0.05).

Non-significant Factors: Maternal age and pre-induction Bishop score did not show statistically significant associations with success (p > 0.05).

Postpartum hemorrhage and infection rates were 6.5% and 3.0%, respectively. Neonatal outcomes were favorable, with only 1.2% having a 5-minute Apgar score < 7 and no recorded mortality.

REFERENCES

1. **Betran AP, Ye J, Moller AB, Souza JP, Zhang J.** Trends and projections of caesarean section rates: global and regional estimates. BMJ Global Health. 2021;6(6). doi:10.1136/bmjgh-2021-005671
2. **Nguyen L. Cesarean Section Trends in Urban Areas of Vietnam:** A Case Study at a District-Level Hospital. International Journal of Research Publication and Reviews. 2025;6:2064–2070. doi:10.55248/gengpi.6.0225.0909
3. **World Health Organization**. WHO Recommendations for Induction of Labour.
4. **World Health Organization.** WHO Recommendation on Use of Low Doses of Vaginal Prostaglandins for Induction of Labour.
5. **Vu Đinh Hieu**. Effectiveness of Labor Induction with Vaginal Dinoprostone at 37 Weeks of Gestation with Indications for Induction at Gia Dinh People's Hospital. Specialist Level II Thesis. University of Medicine and Pharmacy at Ho Chi Minh City; 2022.
6. **Pham Chi Kong, Bui TVP.** Study on the effectiveness of labor induction using vaginal Propess. Vietnam Journal of Obstetrics and Gynecology. 2021;19(1):38–47. doi:10.46755/vjog.2021.1.1173
7. **Daykan Y, Biron-Shental T, Navve D, Miller N, Bustan M, Sukenik-Halevy R.** Prediction of the efficacy of dinoprostone slow-release vaginal insert (Propess) for cervical ripening: A prospective cohort study. Journal of Obstetrics and Gynaecology Research. 2018;44(9):1739–1746. doi:10.1111/jog.13715
8. **American College of Obstetricians and Gynecologists.** ACOG Practice Bulletin No. 107: Induction of Labor. Obstetrics & Gynecology. 2009;114(2 Pt 1):386–397. doi:10.1097/AOG.
9. **McCarthy CM, Meaney S, McCarthy M, Conners N, Russell N.** Induction of labor: reviewing the past to improve the future. 2023. PMCID: PMC9633735. PMID: 36338538.
10. **Le Thi My Hanh.** Effectiveness and Safety of Labor Induction with Prostaglandin E2 in Post-term Pregnancy at Gia Dinh People's Hospital. 2021.
11. **Grobman WA, Rice MM, et al.** Labor induction versus expectant management in low-risk nulliparous women. New England Journal of Medicine. 2018. PMID: 30089070. PMCID: PMC6186292. doi:10.1056/NEJMoa1800566.