

Research Article

Evaluation of the Role of Transvaginal Cervical Sonography for Prediction of Successful Labour Induction by Misoprostol

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Abstract

Introduction: Induction of labour refers to the stimulation of the uterine contractions before the spontaneous onset of the labor. Labor induction is indicated whenever the advantages for mother or fetus are more important than to be continued such as rupture of membranes along with chorioamnionitis or severe pre-eclampsia. **Aim of the work:** To evaluate the role of cervical length in the prediction of success of induction of labour with misoprostol. **Patients and Methods: Study Design:-** Is prospective observational study. **Results: Socio-demographic characteristics of the studied group.** - Age of the studied group were ranged between 19&30 years with mean nearly 23.9 & stander deviation around 2.5. **Summary:** Induction of labour refers to the stimulation of the uterine contractions before the spontaneous onset of the labor .

Keywords: Labour Induction, Misoprostol

Introduction

Induction of labour refers to the stimulation of the uterine contractions before the spontaneous onset of the labor .Labor induction is indicated whenever the advantages for mother or fetus are more important than to be continued such as rupture of membranes along with chorioamnionitis or severe pre-eclampsia

It seems ideal to determine the caesarean risks before starting induction. The standard method for predicting the response to induction is based on the Bishop score Which is defined based on scoring cervical position, cervical consistency, fetal station, cervical effacement, and cervical dilation which are all subjective criteria. ⁽¹⁾.

There are studies that have shown that the prediction rate of the Bishop score is weak mainly because it is a subjecting thrive based protocol and the rate of bias is high.

A great deal of attention has been paid to measuring the cervical length using transvaginal ultrasound as an objective method for predicting induction results. Comparisons between the two methods in predicting induction results have demonstrated great differences

There have been many studies regarding the lack of correspondence between the prediction results in the two methods and it was observed also in the studies found no significant differences. ⁽²⁾.

They found that the cervical length was more successful than the Bishop score in predicting induction result .Other authers demonstrated that the distance between the fetal head and perineum could predict induction results in the same manner as the cervical length and Bishop score. However, other authors suggest that none of the above methods are successful to predict induction results singly.

Some studies have reported that transvaginal sonographic assessment of the cervix may provide a more sensitive prediction of successful induction, compared to the Bishop score. However, the number of patients examined in these studies (n = 50–109) was too small for definite conclusions to be drawn ⁽³⁾.

Aim of the work

To evaluate the role of cervical length in the prediction of success of induction of labour with misoprostol

1^{ry} out come:

-Evaluation if there is correlation between cervical length&successful vaginal delivery after induction by misoprostol.

-If there is cut off value of cervical length at which successful vaginal delivery will anticipate.

2^{ry} out come:

-Detection of number of doses of misoprostol.

-IF patient needs augmentation for example by oxytocin.

-Detection of time interval of induction to vaginal delivery (which should be with in 24 hrs)

Patients and Methods

Study Design:- Is prospective observational study.

Study method:-

Population of study & patient recruitment:

Our study was done on 100 pregnant women whose were recruited from the obstetric department of Minia Maternal University Hospital in the period between May 2017 and October 2018.

1^{ry} out come

- Evaluation if there is correlation between cervical length&successful vaginal delivery after induction by misoprostol.

- If there is cut off value of cervical length at which successful vaginal delivery will anticipate.

2^{ry} out come

- Detection of number of doses of misoprostol.

- If patient needs augmentation for example by oxytocin.

- Detection of time interval of induction to vaginal delivery (which should be with in 24 hrs)

Inclusion Criteria:

1- Maternal age ranged from 18 to 30 years

2- PG – P2+ (primipara & 2nd para)

3- Single living Pregnancy

4- Gestational age between (37 to 42 weeks)

5- Fetal membranes intact.

6- Cephalic presentation

7- No previous scar

8- No utrerine congenital anomalies or fibroid

9- Normal situated placenta.

Exclusion Criteria:

1. Non cephalic presentation

2. Any diagnosis of CPD.

3. History of uterine surgery.

4. Any condition that contraindicate induction of labour :

o Placenta previa OR abruption.

o Any fetal distress.

o Onset of labor pains.

o Eldery PG.

o Grand multipara.

o Multiple gestations.

o Macrosomia.

o Patient’s disapproval.

Results

Socio-demographic characteristics of the studied group.

- Age of the studied group were ranged between 19 & 30 years with mean nearly 23.9 & stander deviation around 2.5 .

Table: Obstetric history of the studied group.

Obstetric history	Studied group (n =90)
Gravidity	
Primigravida	25 (27.8%)
Secondigravida	30 (33.3%)
Multigravida	35 (38.9%)
Parity	
Nullipara	25 (27.8%)
Primipara	42 (46.7%)
Multipara	23 (25.6%)

* Categorical data represented by number and (%).

Discussion

Induction of labour refers to the stimulation of the uterine contractions before the spontaneous onset of the labor. Labor induction is indicated whenever the advantages for mother or fetus are more important than to be continued such as rupture of membranes along with chorio-amnionitis or severe pre-eclampsia⁴.

It seems ideal to determine the caesarean risks before starting induction. The standard method for predicting the response to induction is based on the Bishop score Which is defined based on scoring cervical position, cervical consistency, fetal station, cervical effacement, and cervical dilation which are all subjective criteria.⁽⁵⁾

There are studies that have shown that the prediction rate of the Bishop score is weak mainly because it is a subjective based protocol and the rate of bias is high. A great deal of attention has been paid to measuring the cervical length using transvaginal ultrasound as an objective method for predicting induction results. Comparisons between the two methods in predicting induction results have demonstrated great differences⁽⁶⁾.

There have been many studies regarding the lack of correspondence between the prediction results in the two methods and it was observed also in the studies found no significant differences.⁽⁷⁾

They found that the cervical length was more successful than the Bishop score in predicting induction result. Other authors demonstrated that the distance between the fetal head and perineum could predict induction results in the same manner as the cervical length and Bishop score. However, other authors suggest that none of the above methods are successful to predict induction results singly.⁽⁸⁾

In conclusion, our study has shown that:

Transvaginal sonographic measurement of cervical length, which can be achieved easily and with minimal discomfort to the patient, provides a useful prediction of the likelihood of vaginal delivery within 24 h of induction and of the induction to- delivery interval. Women with

a cervical length of less than 32 mm was counseled that delivery will invariably occur within 24 h of induction, whereas those with cervical length of more than 32 mm was advised that they have a smaller chance of vaginal delivery and needed to repeat more doses and long time interval till vaginal delivery anticipated.

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