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Comparison between Pge2 suppositories and Foley catheter in ripening in pregnant women ≥ 28w during 3 months in Kosar hospital, Ghazvin

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ABSTRACT

The aim of this study was to compare between PGE2 suppositories and Foley catheter in cervical ripening in 60 pregnant women during 28w within 3 months in Kosar hospital. In this study, 30 women undergoing cervical ripening in PGE2 and 30 women were treated with Foley catheter and these two groups were compared. The group under study by Foley catheter was group A and the group treated with PG was group B. The aim of this study was to study the effectiveness of ripening the cervix with a Foley catheter relative to copper PG through the secondary Bishop score than primary ones and thus to determine change of score = BS Bishop.Thus, during birth and during the first stage of the first dose to Acthve phase, this score is reduced. In this study, a statistically significant difference was observed in the secondary BS and BS changes duration delivery and during the first stage of Acthve phase, i.e. when there is stage of index time.duration of delivery time and during pre-induction Stage, the cost of the hospitalization will be decreased, and greatly help the poor people of our country and in this way, lots of financial burden will be removed with cheap instrument.

Keywords: Foley catheter, PG, induction, ripening

INTRODUCTION

Several factors contribute to the success of childbirth. One of them is the cervix. 1) BS is the first sign of desirable cervix. Cervical RIPE and closed is associated with success. Unfortunately, all the women who are not optimal cervical Induction, this process is called as Cervical ripening pre- Induction. Induction in the undesirable cervix increase the length of labor and increase the likelihood of curioinonit and increased C / S[1].Patients and pregnant women that were underwent induction due to the maternal – fetal reasons, need one or several days to soften the unfavorable cervix[2, 3].

Soften the cervix or cervical ripening refers to shortening of anasman dilation that naturally begin in the third quarter before labor on its own[4].this measurable physiological process was included Position, the consistency of the station, dilation, effacement, which is characterized in Genie examination.

BS increased adverse changes in the cervix to a favorable one.
There are two kinds of methods for cervical ripening.
1) Hormonal method; 2) Mechanical method[5]

Mechanical method of Foley catheter was included Stripeng of amniotic and amniotic membranes, including oxytocin, PG, intravaginal, intracervical and estradiol prescription[6].

According to the various reports about the two method of PG and Foley catheter, both are safe. The main objective of this study was to compare the Foley catheter and PGE2 in cervical ripening in 60 pregnant women more or equal to 28w in people with BS≤5.

The purpose of this study was to compare PGE2 gel with a Foley catheter regarding to effectiveness of cervical ripening pre-induction. Women with BS ≤ 5 was referred to pre-Induction was treated with gel PGE2 and catheter Foley in group catheter Foley. In group Foley catheter, ripening 14 was used and oxytocin was used if the patient did not enter to labor[7].

MATERIALS AND METHODS

This study was an experimental and clinical studies carried out in Kosar hospital, Gazvin in 2001. Population of this study was pregnant women whose BS>5 and underwent induction with above or equal to 28w. There was no distinction between the two groups in terms of delivery, birth weight, and hypercytmoltion, Shoulder dystocia, and patient discomfort, the use of epidural, oxytocin and heart beating Pattern. Amount of pre-induction and induction time of Foley catheter had meaningful changes (P≤0 / 01).pre- induction time of Foley catheter is short.

The women were referred to the gynecology and obstetrics clinic of Kosar hospital within 3 months. The population of this study were 60 samples that were divided into 2 groups and were assigned based on simple random sampling method.

Inclusion criteria were Delivery with cephalic presentation, parity was 1, singleton **.**Gestational age more than or equal to 28w.After obtaining informed consent from the patient to participate in a research project and a series of questions about their age, parity, gestational age, and BS, patients were divided into two groups A, Patients were randomly picked one of the papers that have been poured into the bag and automatically entered one of the two groups i.e. Foley catheter or PGE2.Cervical ripening tools of patients were placed by the gynecologist herself and primary and secondary changes pursued by herself too were controlled by the Chief and residents. Cervical ripening was performed after pre- induction by residents.

Having the criteria of months of entry in the group who were selected by Foley catheter, firstly after lithotomy position of the patient, a sterile speculum is placed into vagina.

Then 30 cm of fluid is injected to Foley catheter 14 intracervically. The tip end was inserted into the patient's knee. Catheter were checked in terms of biloba disposal any 4hrs by examination of the cervix and cervical stretching. Patients were supervised by External monitor for 5hrs (30 minutes) and when the catheter was removed, induction starts.

In the PGE2 group, Dinoprostol was used for cervical ripening. In the PGE2 group, the vaginal tab of Dinoprostol that was known as prostin was used and the tablets were placed in the posterior fornix. The patient was placed under the external monitor for one or 2 hours.

Then the patient is allowed to move and her heart rate will be assessed every 1 hour or until the catheter action was occurred. Prostaglandin was repeated every 6h until the BS≤5 or maximum took place 3 days. In a pregnant woman who is under PGE2 or Foley catheter, tests of PLTCBC / diff were done.

In all pregnant patients, Ivline, heart control and catheter action should be measured.

The first Outcome was BS changes. The second outcome were included time Cervical ripening time of the pre-induction, type of labor, hyperstimultion, side effects ,changes in heart rate, birth weight, Apgar score of baby.

RESULTS

Distribution of age in the group A and group B was shown a table 1.No significant difference was observed between the two groups. The majority of the age group in Group B was between the ages of 29-30.

The majority of the age group in Group B (PGE2) are between the ages of 29-30.The frequency distribution was shown in Table 2. The majority of patients of both groups were shown parity 1.

According to K = .37, DF = 2 Parallel> .5, there was not a significant difference between two groups. Distribution of GA in patients undergoing labor induction and PGE2 has been shown in (Table 3) The majority of patients were between the ages of 37-38.The difference in the frequency of secondary BS in patients undergoing labor induction by PGE2 and Foley (Table 5).

Most BS was about Foley catheter> 7 <9.

Most secondary BS was about PG 5-7.BS changes of the frequency distribution of labor induction in patients by using Foley and PGE2 were shown in table 6.Distribution of Cervical ripening time by Foley catheter and PGE2 in patients undergoing labor induction was shown (Table 8).

The 86.6 in both groups were between 2500-3500 gr copper.66/96% of infants in group A has Apgar score 7-10 .while, 33/93% of infants in group B had Apgar score 7-10. In Group A, Apgar score below 7 belonged to a man who was due to meconium. In Group B, Apgar score below 7 was reported about 2 cases that one of them was 30 w due to respiratory stress in fetus and another was 32w .

The data were analyzed by SPSS software through exact Fisher test P value> .05 that there is no significant difference.66.96 of Group B, A had NVD delivery and one cesarean in group A was stable due to pathologic heart failure And one case become candidate C/S due to meconium in Group B .There was a case of meconium in Foley and 2 cases of Fatality due to stress.

That one case of late deceleration that was improved with the Left position and oxygen and did not leads to C / S. And others did not recover by Left position and oxygen and was candidate C / S in a form of stable bradycardia.

Heart rate failure was more in Foley catheter group, but there was no significant difference between two groups. Overall, in Group Foley catheter, 3.33 % had side effects of meconium complications and 6.6% of fatal distress and a total of 10% of patients had side effect.2 Patient in PGE2 group had side effects including discomfort, nausea, vomiting. In total, hyperstimultion in the Foley catheter group was more. In both groups there was a total of two maternal complications (approximately 6.6%), but there was no significant difference between the two groups.

DISCUSSION

In the last 10 years, induction due to maternal – fetal complication has been increased.

Induction of labor in the cervix Khai Unripe is not always successful. That is why, mechanic-medicinal technique was used for Cervical Ripening. This issue has an important role modern labor.

Cervical Ripening happened one or more weeks before normal pregnancy and in terms of biochemical Cervical Ripening, it is characterized by the breakdown of collagen bands of cervix.

Cervical Ripening in mechanical and pharmacology of the drug was used in induction of labor process that normally takes place one week before pregnancy occurs .Most mechanical methods used in the USA was Foley catheter[8].
At the time of Cervical Ripening in both PGE2 and Foley catheter methods, it can be concluded that the time is shorter in Cervical Ripening than the Foley catheter and P <0.01, which marks a significant difference in Foley group **..**

Changes in the Foley catheter group is BS and BS changes in the Foley catheter is suffering and this indicates that changes in Foley BS is much more than PGE2**.**

In the next hypothesis is that during the term of delivery is shorter in the Foley catheter during delivery And at P <0.01 mark is a significant difference between the two groups. In case there is no significant difference in birth weight and electroplating children. In both groups, more weight is between 2500 to 3500 gr.

There was no significant difference in the way the faith because of the C / S because Fattal was the kind of sustained bradycardia. There was no significant difference in the way the faith because of the C / S because Fattal was the kind of sustained bradycardia And a C / S on the PG was due to meconium

There was no significant difference in fetal complications in the group Pg is a case of meconium and preterm fetus because there were two cases of respiratory distress**.**

There was no significant difference and in the Foley catheter group, there was a case of meconium and 2 fatal distress. Maternal complications occurred in 2 cases of hyperstimultion with a Foley catheter that due to prolonged fatal distress become C/S. In addition, in both cases, there was nausea, vomiting with PG.

Thomas et al compared Foley catheter and cervix Ripening. But none of them was effectively observed the efficacy of Foley. In contrast, in our studies, it was found that articles Foley catheter had more efficacy thanPGE2.Foley catheter changes within Cervix Ripening much more meaningful than PGE2.In Thomas studies, PGE2 gel was found to act better than PGE2 gel.

In this study, Gauge et al., Foley catheter work better than Pge2 gel in Cervical Ripening but there was no significant difference between them. Only 62 patients Include explains why they did not see significant changes in the BS

Our study is different from previous study starts immediately after the Foley induction.

In a separate report to the gynecologist is induction. Ultrasound was used in all patients to avoid complications due to significant differences in the pair and Anthony case studies and other Hyperstimultion discomfort patient was seen in the Foley catheter and PG**.**

In oral hystoprozol, Counteraction of Foley catheter and oxytocin, misoprostol orally was very low. In fact, in Foley + induction Hyperstimultion syndrome is higher[9].

In this study the effects of oral misoprostol in multiparous women equal Foley + Indication catheter tops, but is less effective in women Foly induction time[10].

Points of this project was that the doctor in charge of managing the project did not choose blindly patient. In addition, misoprostol was shown to be more effective than oral vaginal drug, but it is more likely to be Hyperstimultion.

In our study, vaginal tablet Dinoprostol catheter + Indication compared with Foley and Foley catheter tops showed more meaningful changes in Indication and on time of Cervical Ripening.

In our study, Dinoprostol 3mg was used every 6h. In our study, in the case of BS not changing and BS<5, the second dose of PG was recommended[7].

In this study, Dinoprostol was used 4 mg for every 4 hr. In the comparison between vaginal misoprostol and vaginal Dinoprostol, Cervical Ripening was used. Vaginal Dinoprostol tab in the study , we use not gel about limiting study is that many more people should be in the study , which requires the PG received more expensive , which is due to the limited number of PG were forced to use. Meanwhile we couldn't use Apgar pH of fetus blood[11].

Variables of this study are as follows

Scale	How to measure	type	Variable
Natural number of year	patient saying	Independent continuous	Age
Natural number	patient saying	Discrete independent	parity
the week	The calculation of ultrasound	Independent continuous qualitative	gestational age
Natural number - year	resident examination based on the definition of the table scoring	independent continuous qualitative	Bishop score
had begun had not begun	medical examination	dependent quantity	active labour
Natural number - year	medical examination	dependent quality continuous	the time period between the beginning of active labor to conduct labour
NVD– C/S	the doctor report	dependent quantity	type of labor
-have -do not have	Examination and parking	Nominal qualitative dependent	Maternal complications
- have -do not have	Examination and parking	Nominal qualitative dependent	Neonatal side effects

Table 1.he age distribution of patients underwent Foley catheter induction and PG in Kosar hospital

PGE2		Foley catheter		group (year)age
Percentage	Number	Percentage	Number	≤ 20
20	6	13.3	4	
26.7	8	30	9	25-21
36.7	11	40	12	30-26
16.7	5	16.6	5	≥31
30		30		total
5.39 ± 25.5		5.35 ± 24.96		mean±SD

K2=0.5 *DF=3* *pvalue*> 0.5

Table2:parity frequency Distribution of patients undergoing induction of labor by Foley catheter and PG in Kosar hospital

PGE2		Foley catheter		group partin
Percentage	Number	Percentage	Number	1
43.3	13	40	12	
36.3	11	33.3	10	2
20	6	26.70	8	3
100	30	100	30	total
1.76 ± 0.76		1.86 ± 0.8		mean±SD

K2=0.37 DF=2 pvalue> 0.5

Table3:GA frequency Distribution of patients undergoing induction of labor by Foley catheter and PG in Kosar hospital

PGE2		Foley catheter		group gestational age
Percentage	Number	Percentage	Number	≥ 40*w*
43.3	13	46.7	14	
46.7	14	50	15	37-39w
10	3	3.3	1	less than 37 w
100	30	100	30	total
37.2 ± 10.34		38 ± 8.9		mean±SD

K2=1.07 DF=2 pvalue> 0.05

Table 4:BS frequency Distribution of patients undergoing induction of labor by Foley catheter and PG in Kosar hospital

PGE2		Foley catheter		group / partin
Percentage	Number	Percentage	Number	0
6.7	2	6.7	2	
6.7	2	3.3	1	1
13.3	4	16.7	5	2
33.3	10	43.3	13	3
26.7	8	20	6	4
13.3	4	10	3	5
100	30	100	30	جمع
2.8 ± 1.83		2.96 ± 1.22		mean±SD

K2=1.26 DF=5 pvalue> 0.5

Table 5: BS frequency distribution in patients induced in the Foley catheter and PG groupsin Kosar hospital

PGE2		Foley catheter		group / partin
Percentage	Number	Percentage	Number	5 – 7
76.7	23	6.7	2	
20	6	60	18	7–≪ 9
3.3	1	33.3	10	higher than 9
100	30	100	35	total
6.8 ± 1.32		8.96 ± 0.72		mean±SD

K2=31 DF=2 pvalue> 0.01

Table6:distribution of BS changes in patients induced using Foley catheter of labor and PG in Kosar hospital

PGE2		Foley catheter		group / partin
Percentage	Number	Percentage	Number	2 – 4
73.3	22	33.3	10	
26.7	8	36.7	11	> 4–≪ 6
0	0	26.7	8	> 6–≪ 8
0	0	3.3	1	≫ 8
100	30	100	30	total
3.9 ± 4.96		5.7 ± 1.53		mean±SD

K2=13.97 DF=3 pvalue> 0.01

REFERENCES

[1] Fletcher H, Mitchell S, Frederick J, Simeon D, Brown D. *Obst Gynecol*. **1994**;83(2):244-7.
[2] Sciscione AC, McCullough H, Manley JS, Shlossman PA, Pollock M, Colmorgen GH. *Am j obstet gynecol*. **1999**;180(1):55-9.
[3] Sanchez-Ramos L, Kaunitz AM, Wears RL, Delke I, Gaudier FL. *Obst gynecol*. 1997;89(4):633-42.
[4] Hofmeyr G, Gülmezoglu A. **2010**.
[5] Tenore JL. *Am fam phys*. **2003**;67(10):2123-8.
[6] Keirse M. *j reprod med*. **1993**;38(1 Suppl):89-100.
[7] Nunes F, Rodrigues R, Meirinho M. *Am j obst gynecol*. **1999**;181(3):626-9.
[8] Abramovici D, Goldwasser S, Mabie BC, Mercer BM, Goldwasser R, Sibai BM. *Am j obst gynecol*. **1999**;181(5):1108-12.
[9] Wing DA, Rahall A, Jones MM, Goodwin TM, Paul RH. *Am j obstgynecol*. **1995**;172(6):1811-6.
[10] Choy-Hee L, Raynor BD. *Am j obs gynecol*. **2001**;184(6):1115-7.
[11] MacKenzie I, Embrey M.. *Br Med J*. **1977**;2(6099):1381-4.