

INDUCTION AT POOR BISHOP IS JUSTIFIED!

RABIA SAJJAD¹, AYESHA SNOVER², NAZIA SAJJAD³, AMBREEN ANWAR⁴

ABSTRACT

OBJECTIVES: To prove that induction at poor bishop is not justified.

STUDY DESIGN: A Prospective study.

PLACE AND DURATION: Obstetrics and Gynecology Department of Military Hospital Rawalpindi from September 2011 to Feb 2012.

METHODOLOGY: Total of 1852 women were included by non-probability consecutive sampling technique, irrespective of parity at term with singleton healthy pregnancy in vertex presentation and were divided into two groups on basis of their bishop score. Health volunteers, cases of uterine rupture, previous cesareans, uncontrolled medical disorder and pregnancy with fetal anomaly for termination were excluded.

Ultrasound for fetal well being were done and strict feto maternal monitoring was done during labor. Medical and elective indications and Bishop scores were recorded before labor induction. Cervical foley no 16 was used in patients with B/S >3. (Group - A) and tablet Prostin E2 was used in patients with B/S < 3 (Group - B) as an initial agent to induce labor. Outcomes like mode of delivery, mean parity and mean age was analyzed by spss11 and P value was found out Performas were attached with patient's case notes.

RESULTS: The cesarean section rate was 32.6% (n=605), SVD were (n=1247). Induction for medical reasons were 14.8% (n=275), with PROM 12.7% (n=237), women with fetal compromise were 11.7% (n=218), with macrosomia 9.07% (n=24), with mild pains 15.3% (n=285), with postdate pregnancy 16.4% (n=340), post term 18.4% (n=305) and patients with oligohydramnios were 1.2% (n=168). Among 1852 from 38 week to 41 week, 1372 patients in group A, with bishop score >3. Rest of 480 were in group B, induced at bishop score <3. In group A, who were induced at B/S >3, total CS were 215, (150 with failed trial of labour) and 1157 were SVD. 65 CS were due to fetal distress. Total CS in group B, with failed trial were 300, C-Section due to fetal distress n=90. SVD were 90 and p=0.001. Mean age was 33.8 years. Mean parity found to be was 2.8 para. Difference in no of CS and SVD in both groups on basis of their bishop score was statically significant and was = 0.001.

CONCLUSION: Bishop score at time of induction should be >3 and induction at poor bishop should be avoided to control the rate of cesarean section.

KEYWORDS: induction, bishop score, sweeping of membranes, amniotomy.

INTRODUCTION

Induction of labor is defined as process which artificially initiate uterine contractions leading to progressive dilatation and effacement of the cervix resulting into vaginal birth.¹ Labor induction carries various risks, including infection, hyper stimulation, fetal distress, uterine rupture and the need for a C-section. Sometimes the benefits of labor induction outweigh the risks.²

Induction of labor is for fetal or maternal indications. Reason for elective induction is convenience of the mother or the obstetrician, with aim to avert the delivery outside the hospital.¹ Rate of Induction of labor is becoming very high in well developed countries as well.³ Prolonged pregnancy is the commonest reason for induction of labor.⁴ The progress and outcome of labor are highly affected by the indication for induction and the gestational age.⁵ Induction of labor is an effective way of reducing perinatal morbidity and mortality associated with post-term pregnancies. It should be offered to

women with post-term pregnancies after discussing the benefits and risks of induction of labor.⁶

Prior to induction calculating a Bishop score is important.⁷ Bishop score at time of induction is good predicting factor for mode of delivery.⁸ When Bishop score is < 6, it is recommended that a cervical ripening agent be used before labor induction. When the Bishop score is favorable, the preferred pharmacologic agent is oxytocin.⁷

For induction, we use prostaglandin E2, and cervical foleys.⁷ Other method is Amniotomy. Used when membranes are accessible, thus reducing need for pharmacological intervention.⁹

Sweeping of the membrane (stripping of the membranes), is another technique usually performed during vaginal examination, clinician's finger is introduced into the cervical os. The inferior pole of the membranes is detached from the lower uterine segment by a circular movement of the finger with aim to initiate labor by increasing local production of prostaglandins and reduce formal induction of labor with either oxytocin, prostaglandins or amniotomy.¹⁰

Poor bishop at induction is associated with rising rate of C-Section so the basic purpose of this study was to determine relationship of poor bishop score with greater risk of cesarean delivery.

METHODOLOGY

This prospective study was conducted at department of Gynecology and Obstetrics Military Hospital Rawalpindi over period of six month. Total of 1852 patients were included in the study. Booked or un booked, patients at term with vertex singleton gestation, were selected by no probability consecutive sampling technique. Health volunteers, cases of uterine

1. Consultant of Gynae/Obs, Combined Military Hospital, Sargodha.
2. Assistant Professor of Gynae/Obs, Rawal Medical and Dental College, Islamabad.
3. Assistant Professor of Gynae/Obs, Avicenna Medical College and Teaching Hospital, Lahore.
4. Professor of Gynae/Obs, Military Hospital, Rawalpindi.

Correspondence to:

Dr. Rabia Sajjad

FCPS Gynaecologist,

Combined Military hospital, Sargodha.

E-Mail: rabia999@ymail.com

rupture, women with previous cesareans, pregnancy for termination with fetal anomaly, pregnancy with uncontrolled medical disorder were excluded from study. Patients were divided into two groups on basis of their bishop score. All patients were admitted and informed consent was signed. History regarding patient's age, marital status, obstetrical and gynecological background was taken. Patients were asked about gestational age, fetal movement, vaginal bleeding and any history of dai handling. All women were examined for pallor, blood pressure, pulse, lymph nodes and thyroid. Detail obstetrical examination for fundal height, fetal heart sound, lie, presentation and engagement of presenting part was done. Bishop score was calculated and adequacy of pelvis was checked. Base line investigation including blood group and Rhesus factor, complete blood and urine examination, hepatitis B and C screening and blood glucose level, were done. Scan for fetal well being was also done to rule out any fetal anomaly. Labor was strictly monitored.

Reason for medical and elective indications were noted. Bishop scores were recorded prior to induction. Patients were divided into two groups on the basis of their bishop score. Group A with bishop score > 3 and group B with bishop score < 3. Cervical foley no 16 and tablet Prostin was used for induction in group A and group B respectively as an initial agent to induce labor. As labor progressed, amniotomy was also done. Strict feto maternal monitoring was done in labor. All findings were documented on predesigned performa. Outcomes like, mode of delivery, mean parity and mean age was analyzed by using spss11 and P value was found out. Performas were attached with patient's case note. Results were depicted by tables and graphs.

RESULTS

Among 1852 women were included in the study, the cesarean delivery rate was 32.6% (n=605), normal vaginal delivery (NVD) % (n=1247). women undergoing induction for medical reasons were % (n = 275), with PROM (n=237), %(n=218) with fetal compromise, with macrosomia 24, n= 285 were in latent phase of labor, with postdate pregnancy n=340 ,post term n=305, n=168 were with oligohydramnios (Table - I).

Indication	Frequency	%Age
Medical indication	275	14.8%
PROM	237	12.7%
Fetal distress	218	11.7%
oligohydramnios	24	1.2%
Macrosomia	168	9.07%
Latent phase of labor	285	15.3%
Post term	340	18.3%
Post date	305	16.4%

C section for failed trial of labour were 440 and fetal distress was seen in one sixty five cases. N=605.

Among 1852 in group A, patients induced with bishop score >3 at time of induction were 1372 in number, cervical foleys and tab prostin (single dose) and amniotomy was done. Rest of 480 women were in group B, induced at bishop score <3 with two doses of tablet prostin and cervical foleys, among these 480 women, 390 ended up in cesarean section. All Women were induced from 38 week to 41 weeks irrespective of bishop score. In group A who were induced at B/S>3, total 215 cesareans were done out of which 150 were with failed trial of labor and 1157 women were delivered vaginally. 65 cesareans were for fetal distress. In group B with B/S <3 at induction, 300 CS were with

failed trial and 90 CS were due to fetal distress. NVD n=90 and p value was 0.001 (Table - II).

Groups	SVD	CS(failed progress) n=450
Group A	1157 (88.5%)	150 (11.5%)
Group B	90 (23.0%)	300 (77.0%)
P value	0.001	0.001

Primi gravida were 392, multigravida were 520, grand multi were 940. Age of all women included in study was from 20 -38 years (Table - III).

Parity	n = (1852)
Primigravida	392
Multigravida	520
Grandmultipara	940

Difference in no. of CS and SVD in both groups on basis of their bishop score was statically significant and p was = 0.001. (Table - II) Mean age in study was 33.8 years and mean parity was 2.8 para. No anesthesia related complications were seen in our patients there was no perinatal, maternal morbidity and mortality. All patients were discharged on 2nd or 3rd post op. day.

DISCUSSION

Our study clearly indicates that induction of labour should be justified and poor bishop score is leading factor for cesarean delivery .In this study, we had two groups of patients and we used cervical foleys, prostaglandins, and amniotomy in these two groups. Use of foley's catheter and membrane sweeping was also supported in another study and proved it an inexpensive and safe method .Membrane sweeping was proved to be effective for improvement in Bishop score and also responsible for shortening the delivery time.⁹ Another study used cervical balloon in group of 87 patients. Control group was of 97 patients, and shorter mean induction-delivery interval was found in the study group. It was concluded that the cervical balloon is a convenient method for the induction of labor, for its affectivity, simplicity, especially in the cases with "unfavorable" cervix.⁷

In our study, group B with poor bishop score, total no of cesarean were 300 (with failed trial) and 90 patients had SVD and p value was 001. (Table - II) Bishop score before induction was an important factor affecting the delivery outcome ,resulting in significantly higher rates of cesarean section and vacuum extraction when the score was unfavorable in another study⁴ and , p was =0.0001 .

All women were induced from 38 week to 41 weeks in our study. Prolonged gestation complicates 5% to 10 % of all pregnancies and confers increased risk to both the fetus and mother¹¹ .Randomized controlled trials suggest that elective induction of labor at 41 weeks may be associated with a decrease in both the risk of cesarean delivery.³ Women undergoing labor induction because of prolonged pregnancy should be sufficiently informed regarding the risks of a cesarean section, the option of elective cesarean section should be considered, particularly in women with an unfavorable cervix, higher age, and high estimated infant birth weight.⁴ With an unfavorable Bishop score (p=0.0001) as statistically significant risk factors for cesarean section⁴. No perinatal mortality or morbidity was seen in our study but another study showing perinatal mortality 3.1% in the women with prolonged pregnancy who were managed expectantly.⁶

A prospective 1 year birth cohort study showed practice of induction of labor are not consistent in different hospitals. The opinions of individual practitioners influence the induction policy nearly as much as do medical reasons. Despite the safety of induction, a liberal induction policy leads to an increase in operative deliveries creating potential risks for the mother and child.³ Another study included 1,389 women and cesarean delivery rate was 12.0% in women in spontaneous labor, 23.4% in women undergoing labor induction for medical reason. 23.8% in women whose labor was electively induced with poor bishop. Bishop score of 5 or less was a predominant risk factor for a cesarean delivery in all 3 groups.¹² similar results were obtained in our study, this rate of CS was 49.5% in group induced at Bishop score <3.

Mean parity and mean age was 2.8 and 33.8 years in our study respectively. Another study mentioned increasing maternal age with increased the risk of cesarean in all parity groups ($P < .05$)¹³ they also showed rising rate of induction worldwide ranged between 7.5% and 26%, from 1983 to 1996.¹² and the rate for all induction was 23.2% in 1997.¹³ In our study ,rate of induction was 52%.

Most common two reasons for induction in our study were medical and prolonged latent phase of labor (table 1). Same was observed in another study showing medical and elective induction most common indication for induction and also responsible for high CS rates.⁶

We used cervical foleys, prostagland in and oxytocin in our patients according to their bishop score .Prostaglandin E₂ vaginal pessary are safe and effective to stimulate labor with ruptured membranes and poor Bishop score and it was proved in comparative study and the induction-initiation of labor interval was short with ($P=0.005$).¹⁴

Mode of delivery has great impact on women's life so this important decision should be made at consultant level to get good maternal, fetal outcome and to give women their best obstetrical future.

CONCLUSION

Induction at poor bishop is not justified. Bishop score should be > 3 before induction. It will definitely control rising rate of cesarean section.

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