



STUDY ON PREGNANCY OUTCOME BEYOND 40 WEEKS OF GESTATION

Obstetrics and Gynecology

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ABSTRACT

Background: The historical basis for the concept of an upper limit of human pregnancy duration was the observation that peri natal mortality increased after the expected due date was passed. Pregnancy beyond dates is one of the most frequent clinical dilemma faced by the obstetricians, whether to choose expected management with ante partum foetal surveillance or to prescribe induction of labour remains controversial.

Aims & Objectives:

To evaluate:

- 1) Spontaneous labour rate.
- 2) Induction rate.
- 3) Caesarean rate.
- 4) Perinatal mortality and morbidity

in uncomplicated pregnancies beyond 40 weeks of gestation.

Materials & Methods:

This Prospective study include random selection of 100 pregnant women both primigravida and multigravida beyond 40 weeks of gestation meeting the inclusion and exclusion criteria admitted in Dept. Of OBGY, GCS Medical College, Hospital & Research Centre, Ahmedabad during a period from MAY 2019 to APRIL 2020. A detailed history and examination was carried out in these patients with close observation till delivery and postnatal period, documented the data and analyzed.

Results: Of the total 100 patients beyond 40 weeks of gestation in the 12 months study period, 58% delivered with spontaneous onset of labour, 28% delivered after induction and 14% had cesarean section.

Conclusion:

According to the present study it seems reasonable to induce labour at 41 weeks of gestation as perinatal mortality and morbidity is significantly more >42 weeks of gestation in our setup. Also, induction of labor at 41 weeks has not led to an increase in the caesarean section.

KEYWORDS

INTRODUCTION:

Historically, the concept of an upper limit of human pregnancy duration was based on increases in perinatal mortality in pregnancies that went beyond their expected due date. Reported frequency of post term pregnancy range from 4 - 14 percent with an average of about 10 percent. Several studies have concluded that these pregnancies are accompanied by a rise in perinatal morbidity and mortality. The presumed etiology for this rise is placental insufficiency. Abnormalities such as congenital anomalies, oligohydramnios, meconium aspiration, fetal asphyxia, fetal dysmaturity, macrosomia and shoulder dystocia are commonly observed in these pregnancies.

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MATERIALS & METHODS:

This study included random selection of 100 pregnant women both primigravida and multigravida beyond 40 weeks of gestation meeting the inclusion and exclusion criteria admitted in Dept. Of OBGY, GCS medical college, hospital & research centre, ahmedabad during a period from MAY 2019 to APRIL 2020.

Inclusion Criteria:

Pregnant women beyond 40 weeks of gestation.

Exclusion Criteria:

Any associated complications like previous LSCS, malpresentations, PIH, Placenta previa and other medical complications.

A detailed history and examination was carried out in these patients

with close observation till delivery and postnatal period, documented the data and analyzed.

RESULTS:

Table 1: Gestational Age Distribution

Gestational age	No of patients	Percentage
40w-40w6d	70	70%
41w-41w6d	26	26%
>=42w	4	4%
Total	100	100%

Table 2: Distribution According To Parity

Gestational Age	Primigravida(%)	Multigravida(%)	Total
40w-40w6d	45(64.28%)	25(35.71%)	70
41w-41w6d	20(76.92%)	6(23.07%)	26
>=42w	3(75%)	1(25%)	4
Total	68	32	100

Table 3: Mode Of Delivery

Mode of Delivery	No of patients	Percentage
Spontaneous vaginal delivery	58	58
Successful Induction	28	28
Caesarean section	14	14

Table 4: Spontaneous Onset Of Labor & Vaginal Delivery

Gestational age	Parity	Spontaneous Labor	%	Delivered Vaginally	%
40w-40w6d	Primi	26	39.39%	24	92.30%
	Multi	20	30.30%	18	90%
41w-41w6d	Primi	13	19.69%	10	76.92%
	Multi	5	7.57%	5	100%

>=42w	Primi	1	1.51%	0	0%
	Multi	1	1.51%	1	100%
Total	66	100%	58	87.87%	

Table 5: Vaginal Delivery After Induction

Gestational age	Parity	Labor Induced	%	Delivered Vaginally	%
40w-40w6d	Primi	19	55.88%	15	78.94%
	Multi	5	14.70%	5	100%
41w-41w6d	Primi	7	20.58%	6	85.71%
	Multi	1	2.94%	1	100%
>=42w	Primi	2	5.88%	1	50%
	Multi	0	0%	0	0%
Total		34	100%	28	82.35%

In this study, induction done with dinoprostone gel.

Table 6: Caesarean Section Rate

Gestational Age	Parity	No of patients	%
40w-40w6d	Primi	6	42.85%
	Multi	2	14.28%
41w-41w6d	Primi	4	28.57%
	Multi	0	0%
>=42w	Primi	2	14.28%
	Multi	0	0%
Total		14	100%

Table 7: Indication For Caesarean Section

Indication	Primi	%	Multi	%
Fetal Distress	4	33.33%	1	50%
Failed Induction	6	50%	0	0%
CPD	2	16.66%	0	0%
Deep Transverse Arrest	0	0%	1	50%
Total	12		2	

Table 8: Gestational Age & Perinatal Morbidity, Mortality

	40w-40w6d	41w-41w6d	>=42w
Admission to NICU	3(4.28%)	5(19.23%)	2(50%)
Perinatal Mortality	1(1.42%)	2(7.69%)	1(25%)

DISCUSSION:

How long should a pregnancy last? Should pregnancy be allowed to run a natural course (or) is intervention necessary?

The purpose of this study is to assess pregnancy outcomes at 40-41, 41-42 and beyond 42 weeks of gestation.

100 women without confounding variables such as hypertension, diabetes, prior cesarean birth, non cephalic presentation, fetal malformations or placenta previa were included in this study done over a period of 12 months.

In Table-1, the study population is distributed according to gestational age. Of the total 100 women, 70 were in 40 weeks group; 26 in 41 weeks group and 4 were in >42 weeks group.

Tables 2 show distribution of the subjects according to parity. Most of the authors agree that pregnancy beyond 40 weeks is found mainly in primigravidae.

Among 100 women, 66 went into spontaneous labor, 34 were induced. As per Table-4&5, 58 women had spontaneous vaginal delivery, 28 delivered vaginally after induction and 14 had cesarean section. A prospective study was conducted by Prabha Singal et al to evaluate the maternal and fetal outcome in prolonged pregnancy at Ajmer in which labor started spontaneously in 54% and induction was done in 46% of the total 150 postdated patients.

According to Tables 4 in our study, vaginal delivery rate in women who went into spontaneous labor was 87.87% and among induced women it was 82.35%. In the study by Prabha Singal et al, vaginal delivery rates in the spontaneous labor group and induced group were 91.4% and 74% respectively. According to meta analysis of randomized control led trials, a policy of labor induction at 41 weeks of gestation reduces

the cesarean delivery rates.

Table 6 shows the cesarean section rate in the three gestational age groups. No. of patients who underwent cesarean section were 8 (57.14%) in the 40-41 weeks, 4 (28.57%) in 41-42 weeks and 2 (14.28%) in > 42 weeks group. The indications for cesarean section were failed induction (42.85%), fetal distress (35.71%), CPD(14.28%) and deep transverse arrest(7.14%). The Canadian randomized trial by Hannah et al had 3407 post term pregnancies and found, contrary to what many obstetricians believe, that induction of labor did not increase the cesarean section rate. The rate was lower (21.2%) in the induction group than in the expectant management group (24.2%) and this reduction was confined to cesarean birth for fetal distress.

Perinatal mortality rate in the study group is 4%. Table 8 shows that perinatal mortality rate was 1.42% in 40 weeks group, 7.69% in 41 weeks group and 25% in beyond 42 weeks group.

So, as perinatal morbidity and mortality is significantly more at and after 42 weeks of gestation in the present study, induction of labor at 41 weeks of gestation should be practiced.

CONCLUSION:

Pregnancy beyond dates is one of the most frequent clinical dilemma faced by the obstetrician. Whether to choose expectant management with antepartum fetal surveillance or to prescribe induction of labour is the question. Though the correct choice of management remains controversial, according to the present study it seems reasonable to induce labour at 41 weeks of gestation as perinatal mortality and morbidity is significantly more > 42 weeks of gestation in our setup. Also, induction of labor at 41 weeks has not led to an increase in the caesarean section.

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REFERENCES

- Cunningham FG, Kenneth JL, Steven LB, John CH, Dwight JR, Catherine YS. Williams Obstetrics. 23rd ed. New York(USA):McGraw-Hill:2010.p.832.
- Bakketeig LS, Berg. Post term pregnancy. Magnitude of the problem: Effective Care in Pregnancy and child birth. Oxford, Oxford University Press. 1991. P. 765.
- Beischer NA, Brown JB, Townsend L. Studies in Prolonged pregnancy III. Amniocentesis in prolonged pregnancy Am. J. Obstet Gynecol 1969; 103:496.
- Veille JC. Fetal renal pulsed Doppler waveform in prolonged pregnancies. Am J. Obstet Gynecol 1993; 169:882.
- Vorherr H. Placental insufficiency in relation to post term pregnancy and fetal post maturity Am. J. Obstet Gynecol 1975; 123:67.
- Petrucha RA, Piatt LD, Yeh SY, et al. Relationship of placental grade to gestational age. Am J. Obstet Gynecol 1982; 144:733.
- Gauthier RJ et al Estriol in pregnancy VII. Unconjugated plasma estriol in prolonged gestation Am. J. Obstet Gynecol 1981; 139: 382.
- Farmakides G. et al. Uterine and umbilical artery Doppler Velocimetry in postterm pregnancy J. Reprod Med 1988; 33: 259.
- Jazayeri A. et al Elevated umbilical cord plasma erythropoietin levels in prolonged pregnancies Obstet Gynecol. 1998; 92: 61.
- McClure Browne JC. Post maturity Am J. Obstetrics Gynecol 1963; 85: 573.
- Zwerdling MA. Factors pertaining to prolonged pregnancy and its outcome. Pediatrics 1967; 40:202.
- Sachs BP, Friedman EA. Result of an epidemiologic study of post date pregnancy J. Reprod Med. 1986; 31: 162.
- Leveno KJ et al : Prolonged pregnancy I. Observations concerning the causes of fetal distress Am J. Obstet Gynecol 1984; 150: 465.
- Eden RD et al.: Perinatal characteristics of uncomplicated postdate pregnancies Obstet Gynecol 1987; 69: 296.
- Claussan B. et al Out comes of post term births: The role of fetal growth restriction and malformations. Obstet Gynecol 1999; 94:758.