



A STUDY OF MATERNAL AND FETAL OUTCOME IN PREGNANCY BEYOND 40 WEEKS

Gynecology

Dr. varsha Patil

Senior Resident, Department Of OBG, ESIC MC Pgimsr , Rajajinagar Bangalore

Dr Ramya S*

Senior Resident, Department Of OBG, ESIC MC Pgimsr , Rajajinagar Bangalore
*Corresponding Author

ABSTRACT

Post dated pregnancy is one which has crossed expected date of delivery . Prolongation of pregnancies complicates pregnancies and carries increased risk to mother and fetus . Emerging evidence demonstrates that the incidence of complications increases after 40 weeks of gestation. The present study conducted to find out the fetomaternal outcome of such prolonged pregnancy.

KEYWORDS

Postdated pregnancy, Perinatal morbidity , maternal complication

Introduction:

Post dated pregnancy is defined as one which has crossed expected date of delivery. Pregnancy more than 42 weeks or 294 days is called post term pregnancy.

Prolongation of pregnancy complicates upto 10% of all pregnancies and carries increased risk to mother and fetus^{1,2}. Post term perinatal mortality is greater than that of term pregnancy in almost all studies³. Post term is also associated with increased maternal morbidity⁴. Ante-partum stillbirth at and beyond term (37-43 weeks gestation) is a major public health problem accounting for a greater contribution to perinatal mortality than either deaths from complications of prematurity or the sudden infant death syndrome⁵.

Exact etiology is not known but some risk factors are associated with postterm pregnancy like parity, maternal age , past history of postterm pregnancy, genetics and obesity^{6,7}.

American college of obstetricians and gynecologists (ACOG), the society for maternal-fetal medicine (SMFM) and other professional societies recommended that the label "term" be replaced by early term, full term, late term and post-term to more accurately describe deliveries occurring at or beyond 37 weeks of gestation.²

- Early term: 37 0/7 weeks through 38 6/7 weeks
- Full term: 39 0/7 weeks through 40 6/7 weeks
- Late term: 41 0/7 weeks through 41 6/7 weeks
- Post-term: 42 0/7 weeks and beyond

The most common cause of prolonged pregnancies is inaccurate dating⁸. The use of standard clinical criteria to determine the estimated delivery date (EDD) tends to overestimate gestational age and consequently increases the incidence of postterm pregnancy⁹. Clinical criteria which are commonly used to confirm gestational age include last menstrual period (LMP), the size of the uterus as estimated by bimanual examination in the first trimester, the perception of fetal movements, auscultation of fetal heart tones, and fundal height in a singleton pregnancy. Ultrasonographic dating in early pregnancy can improve reliability of EDD.

When postterm pregnancy truly exists the cause is usually unknown. Common risk factors include primiparity¹⁰, previous postterm pregnancy¹¹, male fetus¹², obesity¹³, hormonal factors and genetic predisposition¹⁴.

Postterm pregnancy associated with an increased risk of postnatal mortality and morbidity including meconium aspiration syndrome, oligohydramnios, macrosomia, fetal birth injuries, sepsis, rate of non reassuring fetal heart rate, fetal distress in labour and maternal complication increased c.s rate, cephalopelvic disproportion, cervical tear, dystocia, post partum hemorrhage¹⁵.

In the present study, fetomaternal outcome was studied in pregnancy beyond 40 weeks in consideration of spontaneous and induced labor

Methods : A prospective study conducted in Department of Obstetrics

and Gynecology , ESICMC PGI MSR Bangalore , Karnataka . Data collected from pregnant women completed 40 week of gestational age admitted in ESICMC PGSR hospital for 3 years. Aim of study is to know the fetal and maternal complications.

Patient selection

By random selection fulfilling following criteria

- Those who crossed expected date of delivery
- Vertex presentation
- Surety of dates
- Singleton pregnancy
- One first trimester USG
- First visit in first or second trimester

Total 140 patients were selected according to the clinical examination of the patient. After per abdominal examination and per vaginal examination i.e. assessment of bishop's score, every patient are studied . Based on bishop's score they were induced with dinoprostone gel or misoprostol tablets. Mode of delivery , maternal and perinatal outcomes are studied.

Result :

In our study out of 140 pregnant women , Primis are 95(67.85%) in number and Multi are 45(32.15%) in number , Pregnancy beyond 40 week are 137(97.8%) and beyond 41 week are 3(2.2%). 110(78.5%) are at age group 21 to 30 years . In 140 patients 98(70%) were induced , Method of induction with dinoprostone gel 84(85.7%) and with misoprostol tablet are 14(14.3%) . In 60(42.85%) mode of delivery is normal vaginal delivery , 6(4.3%) are instrumental delivery , caesarean section in 74(52.85%) pregnant women , in whom most common indication are are fetal distress 22(30%), MSL 15(20%) , failed induction 14(19%), severe oligohydramnios 10(13.5%), CPD 7(9.5%), others are 6(8%).

TABLE : 1 : Distribution of cases according to Parity

Gravida	No. of patients (%)
Primi	95(67.85)
Multi	45(32.15)

TABLE : 2 : Distribution of cases according to Gestational Age

Gestational age	No. of patients (%)
>40	137(97.8)
>41	3(2.2)

TABLE : 3 : Distribution of cases according to Age

Age in years	No of patients(%)
<20	14(10)
21-30	110(78.5)
>31	16(11.5)

TABLE : 4 : Distribution of cases according to Method of Induction

Method of induction	No of patients(%)
Cerviprime gel	84(85.7)
Cytotec	14(14.3)

TABLE : 5 : Distribution of cases according to Method of delivery

Method of delivery	No of patients(%)
FTND	60(42.85)
INSTRUMENTAL	6(4.3)
LSCS	74(52.85)

TABLE : 6 : Distribution of cases according to Indication for LSCS

Indication for LSCS	No of patients(%)
CPD	7(9.5)
FETAL DISTRESS	22(30)
MSL	15(20)
FAILED INDUCTION	14(19)
SEVERE OLIGOHYDROMNIOS	10(13.5)
OTHERS	6(8)

TABLE : 7 : Distribution of cases according to APGAR SCORE at 5 min

APGAR SCORE at 5 min	No of patients(%)
<7	26(18.5)
>7	114(81.5)

Discussion :

The present study was conducted to find the maternal and perinatal morbidity associated with post dated pregnancy , total of 140 cases were post dated in 3 year period which are selected based on inclusion criteria.

Incidence of post dated pregnancy were more among primiparity , Olesen aW¹⁰ in his study found that majority of postdated patients belonged to primiparity .

Majority of patients were between 40-41 week in our study which correlates with Nikita Patel¹⁶ .

Majority of patients were more in age group 21-30 years , Beischer¹⁷, Bancroft¹⁸ in his study found that majority of postdated patients belonged to the age group 21-30 years.

In the present study, induction of labour are done in 70% of postterm pregnancy. A comparative study done by C.J.M Sneijers et al. shows 88.7% rate of induction in postterm pregnancy. Present study shows that percentage for type of induction for Cerviprime and misoprostol (25µg) was 85.7% and 14.3%, a comparative study done by Ss Ramesh et al. shows 74.4% and 9.21% for Cerviprime, and misoprostol (25µg) respectively.

In the present study Mode of delivery are 60 (42.85%) is normal vaginal delivery , 6(4.%) are instrumental delivery , caesarean section in 74(52.85%) which correlates with study done by Farhat naz/amina javid¹⁹ shows that rate of LSCS, FTVD (spontaneous or induced) and Instrumentation was 70%, 18.33% and 11.67% respectively. Study done by Kana R Odedara²⁰ shows that rate of LSCS, FTVD (spontaneous or induced) was 62% and 38% respectively.

Most common indications for LSCS are fetal distress 22(30%), MSL 15(20%) , failed induction 14(19%), severe oligohydromnios 10(13.5%), CPD 7(9.5%), others are 6(8%), which correlates with Martin²¹ et al 31.6% and other studies James Alexander²² et al also showed fetal distress is most common indication for LSCS.

Majority of babies 114(81.5%) were having Apgar score >7. Singal P et al²³, James Alexander et al.²² and Heimstad R et al.²⁴ found similar results as present study.

Conclusion :

Post term pregnancies require early detection, effective and proper planning management. With Regular antenatal check-up, incidence of postdate pregnancy can be decreased and it is important because of definite risk to fetus as pregnancy continuing beyond 40 weeks of gestation is associated with increased perinatal morbidity and mortality.

Reference :

- Olesen aW, Westergaard JG, Olsen J. Perinatal and maternal complications related to postterm delivery: a national register-based study, 1978-1993. *am J Obstet Gynecol.* 2003b;189:222-7.
- Norwitz ER, Snegovskikh VV, Caughey AB Prolonged pregnancy: when should we intervene? *Clin Obstet Gynecol.* 2007;50:547-57.
- Vorherr H. Placental insufficiency in relation to postterm pregnancy and fetal postmaturity. evaluation of fetoplacental function; management of the postterm gravida.

- am J Obstet Gynecol. 1975;123:67-103.
- Caughey ab, Stotland ne, Washington ae et al. Maternal obstetric complications of pregnancy are associated with increasing gestational age at term. *am J Obstet Gynecol.* 2007;196:155.e1-e6.
- Cotzias CS, Paterson-brown S, Fisk nM. Prospective risk of unexplained stillbirth in singleton pregnancies at term: population based analysis. *br Med J.* 1999;319:287-8.
- Divon MY, Haglund B, Nisell H, Otterblad PO, Westgren M. Fetal and neonatal mortality in the postterm pregnancy: the impact of gestational age and fetal growth restriction. *Am J Obstet Gynecol* 1998;178 (4):726-31.
- Van Eyk N, Allen LM, Sermer M, Davis VJ. Obstetric outcome of adolescent pregnancies. *Journal of Pediatric and Adolescent Gynecology* 2000;13 (2):96.
- Neilson JP. ultrasound for fetal assessment in early pregnancy. *Cochrane database Syst Rev.* 2000;2:Cd000182.
- Taipale P, Hillermaa V. Predicting delivery date by ultrasound and last menstrual period on early gestation. *Obstet Gynecol.* 2001;97:189-94.
- Olesen aW, basso O, Olsen J. an estimate of the tendency to repeat postterm delivery. *epidemiology.* 1999;10:468-9.
- Mogren i, Stenlund H, Hogberg u. Recurrence of prolonged pregnancy. *int J epidemiol.* 1999; 28:253-7.
- Divon My, Ferber a, nisell H et al. Male gender predisposes to prolongation of pregnancy. *am J Obstet Gynecol.* 2002; 187:1081-3.
- Usha Kiran tS, Hemmadi S, bethel J et al. Outcome of pregnancy in a woman with an increased body mass index. *bjOG.* 2005;112:768-72.
- Laursen M, bille C, Olesen aW et al. Genetic influence on prolonged gestation: a population-based danish twin study. *am J Obstet Gynecol.* 2004;190:489-94.
- Cunningham FG, Leveno KJ, Bloom SL, Hauth JC, Larry CG III, Wenstrom KD. Post-term pregnancy. 23rd ed. In: William's Obstetrics. New York: McGraw-Hill Companies; 2010. pp. 832-41.
- Nikita Patel, Prerak Modi. A Study of Maternal and Fetal Outcome in Postdate Pregnancy. *IJSR.* 2015;78.96.
- Beischer NA, Evans JH, Townsend L. Studies in prolonged pregnancy. Incidence of prolonged pregnancy. *Am J Obstet Gynecol.* 1969;103:476
- Bancroft- Livingston G, Neill DW. Studies in prolonged pregnancy, Cord blood oxygen levels at delivery. *J Obstet Gynecol.* 1957;64:498-503.
- Farhat N, Amina J, Sara S, Altaf B, Amtullah Z. Neonatal Outcome in Post-term Pregnancy. *PJMHSOnline.* 2009
- Kana R Odedara , Pooja A Kamaria. e-ISSN: 2279-0853, p-ISSN: 2279-0861. Volume 15, Issue 9 Ver. XIV (September. 2016), PP 24-25.
- Martinb C, De paula, Marque AM, Silva D. J Obstet Gynecol. 1969;56:830.
- Alexander JM, Macer CL. Elective induction versus spontaneous labor: A prospective study of complications and outcome. *Am J Obstet Gynecol.* 1992;166:1690-7.
- Singal P, Sharma A. Fetomaternal outcome following postdate pregnancy – a prospective study. *J Obst Gynecol Ind.* 2001;51(5):89-93.
- Heimstad R, Romundstad PR, Eik-Nes SH, Salvesen KA. Outcomes of pregnancy beyond 40 weeks of gestation. *Obstet Gynecol.* 2006;108:500-8.