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Original Research Article

A study of postdatism: its incidence and associated morbidities in a tertiary care centre: a prospective observational study

Sneha Miskin*, Tushar Palve, Rutuja M. Narvekar, Ketki Parasnis

Department of Obstetrics and Gynecology, Cama and Albless Hospital, Grant Government Medical College, Mumbai, Maharashtra, India

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***Correspondence:**

Dr. Sneha Miskin,

E-mail: sneha22miskin41998@gmail.com

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ABSTRACT

Background: The study shows the incidence of postdatism in a pregnancy, and to find out the incidence of maternal and fetal complications, perinatal mortality in postdated pregnancy.

Methods: All registered ANC patients coming to OPD and labour ward completed 40 weeks of gestational age by date (who were sure of the date of last menstrual period) or by scan (considering early weeks scan) are considered in the study. History and examination of the patients are done and mode of delivery was decided accordingly. Fetal monitoring was done using non stress test, ultrasonography and DFKC charting maintained.

Results: Postdatism is very common in primigravida (61%) than multigravida, and is common in age group of 21-30 years (67%), most common mode of delivery was vaginal delivery with approximately 30% undergoing LSCS due to various reasons. In perinatal assessment there was one IUFD and 5 NICU admissions in a total of 100 postdatism pregnancies. Maternal morbidities like sepsis, postpartum hemorrhage, perineal tear ivo shpulder dystocia and big baby will also be present in small number of cases.

Conclusions: This study shows the incidence of postdatism according to gravida score and age factors. It also shows the associated perinatal and maternal morbidities in a patient with postdatism.

Keywords: Postdatism in pregnancy, Fetal complications, Perinatal mortality

INTRODUCTION

Post dated pregnancy is defined as one which has crossed expected date of delivery which is taken beyond 40 weeks of gestational age. Pregnancy more than 42 weeks or more than 294 days is called post term pregnancy. Fernandos Arias defined prolonged pregnancy as those pregnancies advancing beyond the expected date of delivery (EDD).¹ Prolongation of pregnancy complicates up to 10% of all pregnancies and carries increased risk to mother and fetus.^{2,3} Post-date pregnancy could lead to prolonged pregnancy lasting up to 42 completed weeks or more, increased obstetric interventions, and maternal and foetal morbidities.^{4,5} The incidence and exact etiology of accurate prolonged pregnancy are not fully understood.^{6,7}

However, it is believed to have multifactorial pathogenesis with variations in the corticotropin-releasing hormone, racial/ hereditary/genetic factors, and low maternal vaginal foetal fibronectin levels at 39 weeks playing a role.^{6,7} Central nervous system abnormalities such as anencephaly and sociodemographic factors like living standards are also thought to be contributory.⁶ Recognized risk factors for prolonged pregnancy include nulliparity, male foetal gender, obesity, prior prolonged pregnancy, and genetic factors.⁸

The maternal risks of postdated pregnancy are often underappreciated. These include an increase in labor dystocia (9-12% vs. 2-7% at term), an increase in severe perineal injury (3rd and 4th degree perineal lacerations)

related to macrosomia (3.3% vs. 2.6% at term) and operative vaginal delivery, and a doubling in the rate of caesarean delivery (14% vs. 7% at term).^{9,10} The latter is associated with higher risks of complications such as endometritis, postpartum hemorrhage, and thromboembolic disease.¹⁰ Complications to both mother and foetus are seen in postdated pregnancies. It has been reported that in a pregnancy which has crossed the expected date of delivery, there is an increased risk of oligohydramnios, meconium-stained amniotic fluid, macrosomia, foetal postmaturity syndrome and caesarean delivery, all of which jeopardize the baby as well as the mother. As there is foetal and maternal risk associated with postdated pregnancy, need of induction is more with postdated pregnancy. The availability of biophysical profile and electronic foetal monitoring can affect the outcome of a given pregnancy.¹⁰

METHODS

This study is a prospective observational study that is conducted at Department of Obstetrics and Gynecology of a tertiary care centre with the study duration of- 18 months (January 2020 to August 2021). 100 cases of postdatism pregnant woman were selected from antenatal clinic and Labor Room.

Inclusion criteria

Inclusion criteria were; Pregnant women with above 40 weeks gestation either by date (corrected LMP) or by scan (from early weeks USG OBS), Pregnant women willing to partake in study, Singleton pregnancy and Cephalic presentation.

Exclusion criteria

Exclusion criteria were; pregnant women with previous Caesaren Section, malpresentations, placenta previa, abruption requiring urgent termination and Fetal anomalies.

Complete clinical assessment of postdated patients was done including associated maternal conditions and complications. Foetal monitoring was done with the help of nonstress test, ultrasonography and daily fetal movement count. With the help of above monitoring timely interventions were done.

RESULTS

According to our study, the incidence of postdatism was highest in primigravida of about 61%. Maximum cases were primigravida with about 61%. A total number of 68 FTND's of which 30 were induced (44.11% of FTND were induced). A total number of 32 underwent LSCS, in which 5 patients were induced for trial of normal vaginal delivery (15.62% of LSCS patients were induced). Maximum number of cases, i.e., 38.23% indications were fetal distress, in 32.35% indications were non progression of

labour (NPOL), 20.58% indications were of meconium-stained amniotic fluid, 5.88% indications were of severe oligohydramnios and in 2.94% indications were of anhydramnios.

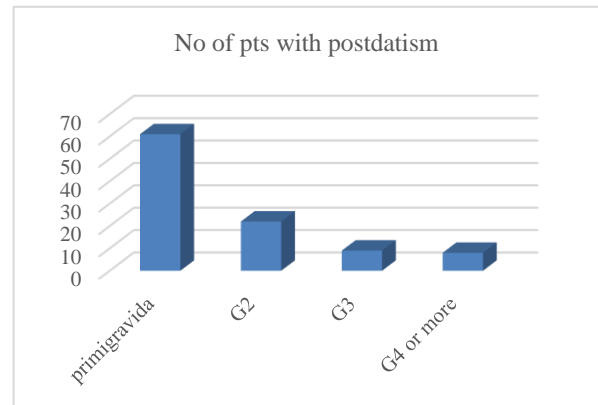


Figure 1: Incidence of postdatism according to gravida score.

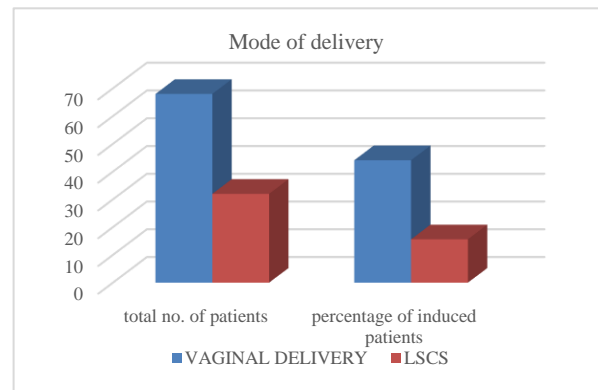


Figure 2: Incidence of mode of delivery in postdatism patient.

Table 1: Indications for LSCS.

Indications for LSCS	N	%
Fetal distress	12	35.29
NPOL	11	32.35
Severe oligohydramnios	2	5.88
Anhydramnios	1	2.94
MSAF	7	20.58
Non-reactive NST	1	2.94

Maximum 35% cases were of age group 26-30 followed by 32% by 21-25, 15% by 31-35 age group and 13% by ≤20 remaining 6% by more than 36 yrs. Total 5% were NICU admissions of the baby born by postdatism women. In about 100 deliveries of postdatism mothers, 1% was IUF, 5% babies were admitted in NICU for various reasons like respiratory distress, meconium aspiration syndrome, low birth weight, trauma during delivery etc. remaining all were good, baby with mother-among which 10 (10.63%) babies were low birth weight not requiring

NICU monitoring. Oligohydramnios found in 5%, atonic PPH in 4% and perineal tear in 1%.

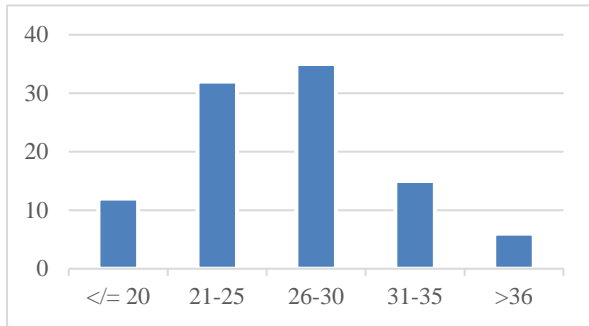


Figure 4: Incidence of postdatism by age group.

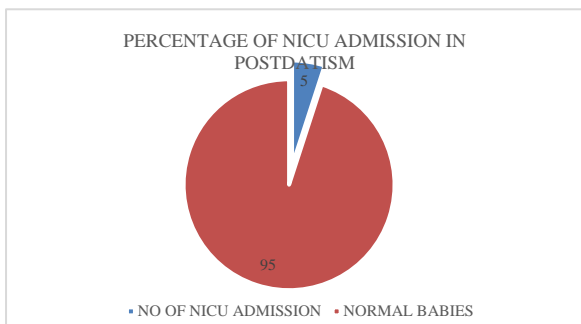


Figure 5: Perinatal complications in patients with postdatism.

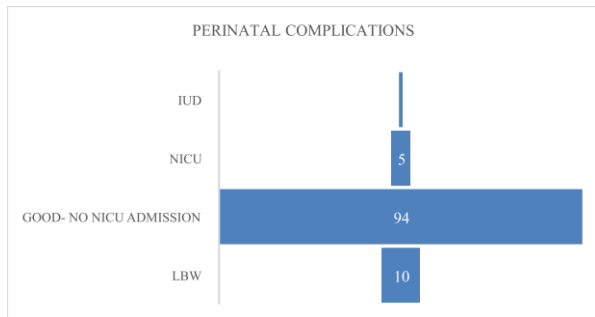


Figure 6: Perinatal complications.

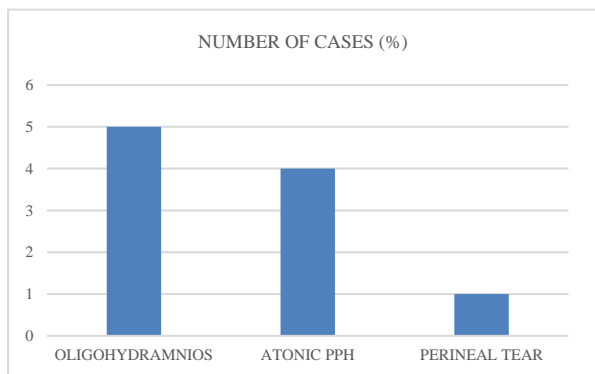


Figure 7: Maternal complications in patients with postdatism.

DISCUSSION

This study includes both primigravida and multigravida beyond 40 weeks of gestation admitted in Department of Obstetrics and Gynaecology, Cama and Albless Hospital, Mumbai, Maharashtra. In our study, majority cases were primigravida (61%) which is similar to Mahapatro *et al* study.^{11,12}

In our study, out of 100 cases, 68 cases were full-term vaginal delivery, whereas 32 cases were of LSCS, out of 38 cases 35 (56.9%) progressed and delivered spontaneously, and 30 cases (44.11%) delivered after induction of labor. Rate of LSCS is 32% in our study and in the study by Mahapatro it was found to be 28.9%.¹² Prolonged delivery was associated with increased risks of perinatal complications such as foetal distress and meconium aspiration syndrome. The rate of caesarean section was higher in prolonged pregnancies. In our study, most common indication for LSCS was foetal distress of about 35.29%, followed by non-progression of labour in 32.35% followed by meconium stained amniotic fluid in about 20.58%, whereas in Bhiregu article most common indication was MSAF of 23.53% followed by failure of induction and non-progression of labour of 20.59% in each.¹³ Whereas Mahapatro's study foetal distress was found to be the most common indication for LSCS (65.5%).¹² In our study, out of 100 cases, 35 (35%) cases were under 26-30 years, 32 (32%) cases were under 21-25 years, 15 (15%) cases were under 31-35 age group and 13 (13%) cases were under ≤20 remaining 6 (6%) cases were under 36 yrs. With the mean age group of 26.34. In our study majority of patients were below 30 years of age. Alexander et al found similar results with most of the patients were between 20-30 years of age group and mean gestational age in group 1-24.4±5.3years and in group 2-24±5.3 years.¹¹ Prolonged delivery was associated with increased risks of perinatal complications such as foetal distress and meconium aspiration syndrome. The rate of caesarean section was higher in prolonged pregnancies. Perinatal morbidity and mortality is centered on adequacy of finding better methods for recognizing a high-risk foetus, the ideal time for testing, monitoring method, optimum time and mode for delivery.

CONCLUSION

Postdated pregnancies require early identification and effective and proper planned management. The adverse outcome can be reduced by counselling for an antenatal checkup and follow-up during pregnancy and proper monitoring during labour. The timely onset of labour is an important determinant of perinatal outcome. Confirmation of diagnosis of postdatism is very important. It should be done by first trimester USG, along with LMP (considering patients with regular menstrual cycle and sure of date). In management of postdatism a careful advice and proper monitoring can alleviate maternal anxiety and untoward complications.

Pregnancy beyond 40 weeks needs frequent amniotic fluid index monitoring as in our study we found more cases of oligohydramnios. The availability of biophysical profile and electronic foetal monitoring can affect the maternal and foetal outcome. After 41 weeks of gestation if the dates are confirmed, women should be offered elective delivery. Women with uncomplicated pregnancies should be offered induction of labour, while women with any complicating factors LSCS should be considered. The adverse outcome can be reduced by making accurate gestational age and diagnosis of postterm gestation as well as recognition and management of risk factors.

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Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Fernando A. Practical guide to high risk pregnancy and delivery 3rd ed; India: Harcourt private limited; 2008:255-70.
2. Norwitz ER, Snegovskikh VV, Caughey AB Prolonged pregnancy: when should we intervene? *Clin Obstet Gynecol.* 2007;50:547-57.
3. Olesen AW, Westergaard JG, Olsen J. Perinatal and maternal complications related to post term delivery: a national register-based study, *Am. J Obstet Gynecol.* 1993;189:222-227.
4. Chantry AA, Lopez E. Fetal and neonatal complications related to prolonged pregnancy. *J Gynecol Obstet Biol Reprod.* 2011;40(8):717-25.
5. Cleary-Goldman J, Bettes B, Robinson JN, Norwitz E, D'Alton ME, Schulkin J. Postterm pregnancy: practice patterns of contemporary obstetricians and gynecologists. *Am J Perinatol.* 2006;23(1):15-20.
6. Abeshi S. Postdate pregnancy. In: Udoma EJ, Ekanem EI, eds. *Textbook of Clinical Obstetrics in the Tropics for Undergraduate and Postgraduate Students.* 1st ed. Nigeria: University of Calabar Press; 2014:109-12.
7. Roman AS. Late pregnancy complications (prolonged or postterm pregnancy). In: Decherney AH, Nathan L, Laufer N, Roman AS, eds. *Current Diagnosis and Treatment: Obstetrics and Gynecology.* 11th ed. New York: McGraw-Hill Companies; 2013:250-66.
8. Divon MY, Ferber A, Nisell H, Westgren M. Male gender predisposes to prolongation of pregnancy. *Am J Obstet Gynecol.* 2002;187(4):1081-3.
9. Rand L, Robinson JN, Economy KE. Post-term induction of labor revisited. *Obstet Gynecol.* 2000; 96(5):779-83.
10. Treger M, Hallak M, Silberstein T. Post-term pregnancy: should induction of labor be considered before 42 weeks? *J Maternal Fetal Neonatal Med.* 2002;11(1):50-3.
11. Alexander J, Macer CL, Chan LS. Elective induction versus spontaneous labour: A prospective study of complications and outcome. *Am J Obstet Gynecol.* 1992;166:1690-7.
12. Mahapatro A. Fetomaternal outcome in pregnancy beyond 40 weeks. *Int J Pharm Bio Sci.* 2015;6:53-8.
13. Bhriegu R, Agrawal M, Hariharan C. assessment of maternal and perinatal outcome in postdated pregnancy. *J Datta Meghe Inst Med Sci Univ.* 2017;12:35-40.

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