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Original Research Article

EXIGENCY OF POSTTERM PREGNANCY ON MOTHER AND FETUS

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ABSTRACT:

Background: Postterm pregnancy is when a woman has not yet delivered her baby after 42 weeks of gestation, two weeks beyond the typical 40-week duration of pregnancy. Post mature births carry risks for both the mother and the baby, including fetal malnutrition, meconium aspiration syndrome, and stillbirth. After the 42nd week of gestation, the placenta which supplies the baby with nutrients and oxygen from the mother starts ageing and will eventually fail. Postterm pregnancy is a reason to induce labor. The current definition and management of postterm pregnancy have been challenged in several studies as the emerging evidence demonstrates that the incidence of complications associated with postterm pregnancy also increase prior to 42 weeks of gestation. **METHOD:** this study was carried at obstetrics and gynaecology dept of SSMC Rewa, over a period of july 2022 – sept 2022.100 antenatal pts. beyond 40wk. of gestation were selected by non-randomised method with inclusion and exclusion criteria who has given written consent. **RESULTS:** total of 100 cases were taken out of which 64 delivered full term vaginal pregnancy, out of which 57 were between 40-41wk of GA and 7 pts. were between 41-42wk of GA. 34 pts. delivered by LSCS among them 29 pts. were between 40-41wk of GA and 5 pts. were 41-42 wk of GA . 2 pts. were delivered by instrumental delivery between 40-41wk of GA. **CONCLUSION:** Postterm pregnancy is associated with fetal, neonatal and maternal complications including morbidity and perinatal mortality. These risks were originally underestimated because of inaccurate pregnancy dating and the denominator used to define stillbirth. The use of routine ultrasound for dating in the first trimester has decreased the overall rate of postterm pregnancy and demonstrated higher complication rates in postterm pregnancies due to better distinction between term and postterm gestation. Also the use of on-going pregnancies as a denominator for stillbirth rather than pregnancies delivered has shown a six-fold increase in perinatal complications in postterm women.

1. INTRODUCTION

Postdate, postterm, postmaturity, and prolonged pregnancy is accepted terms by WHO and the International Federation of Gynaecology and Obstetrics to describe pregnancy beyond dates (expected date of delivery). As per WHO, postterm pregnancy (PTP) is defined as a pregnancy that persists beyond 294 days or 42 weeks of gestation.

Several retrospective and relatively small studies have concluded that prolongation of pregnancy beyond term is accompanied by a rise in perinatal morbidity and mortality.

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Abnormalities such as congenital anomalies, oligohydramnios, meconium aspiration, fetal asphyxia, shoulder dystocia and fetal dysmaturity are commonly observed in these pregnancies. The presumed etiology for this rise in perinatal morbidity and mortality is "placental insufficiency."[5]

The postmature births are more likely when the mother has experienced a previous postmature birth. Due dates are easily miscalculated when the mother is unsure of her last menstrual period. When there is a miscalculation, the baby could be delivered before or after the expected due date. Postmature births can also be attributed to irregular menstrual cycles. When the menstrual period is irregular it is difficult to judge the moment of ovulation and subsequent fertilization and pregnancy. Some postmature pregnancies may not be postmature in reality due to the uncertainty of mother's last menstrual period.[7]

- Prevalence and etiology

The prevalence of PT is commonly reported as 4–10%. InEurope, the prevalence estimates range from 0.8% to 8.1%. This wide variation is likely to be the consequence of different policies of labor induction and methods for assessing gestational age (GA). Ultrasound (US) dating ofpregnancy is more accurate than that based upon the lastmenstrual period (LMP) and the use of routine US dating significantly reduces the rate of PT. When pregnancies are routinely dated by USG and in the absence of a policy of induction only 7% of the pregnancies progress beyond 294days and 1.4% beyond 301 days. The etiology of PT is largely unknown, but both fetal abnormality (e.g., anencephaly) and placental sulphatase deficiency can be associated with prolongation of pregnancy. It has also been suggested that some genetic factors w56x, fetal gender w28xand a highpre-pregnancy body mass index (BMI) can contribute to an increased risk for PT.[8,9]

GOALS AND OBJECTIVE

- To prevent the prolongation of pregnancy by inducing labor
- Expectant treatment under close surveil-lance, with active management by induction of labor or CS only when specifically indicated

In either case, correct assessment of GA is crucial to avoid unnecessary interventions.

2. MATERIAL AND METHODS

This was a prospective observational study carried out in the department of obstetrics and gynaecology of Shyam shah medical college Rewa, India from July 2022- Sept. 2022 for a period of 6 months. Written informed consent was taken from the patient. A total 100 patients were included with non-random sampling method.

Inclusion criteria

- Pregnant women more than 40 weeks of gestation (last three menstrual cycles regular, not used contraceptive pills for the past 3 months, not conceived during lactational amenorrhea)
- Singleton pregnancy
- Cephalic presentation
- The patients who have given written informed consent to participate in this study were included.

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Exclusion criteria

- Any associated complications such as previous lower segment cesarean section (LSCS), malpresentations, placenta previa, abruption, PIH, gestational diabetes, anaemia, and other medical complications
- Fetal anomalies.

Postdated pregnant patients fulfilling inclusion and exclusion criteria were included in the study. Detailed history was obtained from the patient about the socioeconomic status, booked/unbooked, the patient's age, obstetric code, gestational age, menstrual history, obstetric history. General physical examination, systemic examination and obstetric examination were carried out. Per speculum and per vaginal examination was done. Blood investigations - complete blood counts, liver function tests, kidney function tests, blood sugar, blood grouping, urine analysis, HIV, VDRL, HBsAg, and HCV were done. USG Doppler and NST were done. Decision of delivery route was done as required. Some patients were already in spontaneous labour, some were subjected to induction of labour. If delivery was done by caesarean section, the indication was recorded. Perinatal morbidity by low Apgar score meconium aspiration syndrome, neonatal intensive care unit (NICU) admission and mortality if any was recorded. Maternal complications such as postpartum haemorrhage, perineal tear, etc were also recorded.

OBSERVATIONS

Table 1: Demographic distribution

Age (years)	No. of cases (N)	Percentage
20-25	64	64
26-30	17	17
31 35	16	16
>35	3	3
Parity		
Primigravida	69	69
P2	19	19
P3	7	7
>P3	5	5
Residence		
Rural	72	72
Urban	28	28
Booked	20	20
Unbooked	80	80

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Table 2: mode of delivery

Gestational age	Full term vaginal delivery	Lower segment cesarean section	Instrumental delivery
(40wk+1d)-(41wk+ 0d)	57	29	2
(41wk+1d)-(42wk+0d)	7	5	
Total (100)	64	34	2

Table 3: indication for cesarean section

percentage	Indication for LSCS
23.5%	Mecounium stained liquor with fetal distress
20.5%	Failed medical indication
20.5%	Pathological NST
17.61%	Cephalopelvic disproportion
15%	Non-progression of labor
2.9%	Cervical dystocia

Table 4: LSCS due to maternal complication

Indication	percentage
Oligohydramnios	17%
Perineal tear	4%
PPH	3%
Shoulder dystocia	5%

Table 5: LSCS due to fetal complications

Indication	Percentage
Fetal distress	9%
Mecounium stained liquor	7%
IUGR	1%

3. DISCUSSION:

The present study was conducted to find out incidence of maternal complications, perinatal morbidity and mortality in post-dated pregnancy. A total of 100 pt. were enrolled according to inclusion and exclusion criteria.

In our study most of the pt. were from the age group of 20-25yr. that is 64, 17 pt. were from 26-30 yr. of age, 16 pt. were from 31-35 yr. of age and only least i.e. 3 pt. were more than >35 yr of age.

This comparison shows that most of the antenatal pts. were of younger age group. Compared to the study by Dobariya PV et al, there were 58 (69.05%) patients in age group 20 to 30 years, [2]

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Maximum of women were Primigravida (69%) and least were (5%) from grand multipara >p3, 19% women were second gravida and 7% were third gravida. According to Mahapatro et al, found maximum (72%) of patients were primigravida.

In the study most of the pts. were from rural areas (72%) and (28%) were from urban area only 20% pts. were booked and the rest 80% wereunbooked this stats that most of the pts. were having miscalculated delivery dates and most of the pts. were not having any early dating scan foe EDD that presents the lack of awareness amongst the women in rural areas for advantages of routine antenatal care and medications. Although many pts. were having irregular menstrual cycles due to which they have [miscalculated] their EDD and land up in post-dated gestational age. [4]

Due to this lack of awareness and deliveries in postdated pregnancy has landed up many complications in maternal as well as in perinatal morbidity

In our study a total of 64 pts. Delivered through normal vaginal delivery, 34 pts. delivered through LSCS and only 2 pts. Delivered from instrumental delivery. Out of which 57 pts. from 64 were having GA between (40wk+1d) – (41wk+0d) and 7 pts. were having GA between (41wk+1d) – (42wk+0d). [4]

In LSCS pts. 29 pts. were from (40wk+1d) – (41wk+0d) and 5 pts. were having GA of (41wk+1d) – (42wk+ 0d).

2 pts.out of 100 had instrumental delivery as they reached in 2 stage arrest in labor. The rate of instrumental delivery in this study was 2%, whereas in Mahapatro's study it was found to be 5.72%. [4]

The indications for cesarean section in our study were max. from i.e. 23.5% due MSL, 20.5 % were from FMI, 20.5 % from patho. NST, 17.6% CPD, 15% NPOL, and least 2.9% from cervical dystocia. In the study by Akhtar P et al, caesarean section was done in view of fetal distress in 32% cases, non-progress of labour in 25.3% cases and failure of induction in 24% cases.[1]

In study the most common maternal complication was Oligohydramnios 17%, rest were perineal tear 4%, PPH 3%, shoulder dystocia 5%. . In study conducted by Patel N et al, maximum morbidity was because of perineal tears/cervical tears in 10 patients (34.44%) and prolonged labour/shoulder dystocia in 10 patients (34.44%) followed by postpartum haemorrhage in 6 patients (20.47%). There was no maternal mortality.[3]

Fetal complications due postdated pregnancy were 9% fetal distress, 7% MSL, and 1% were IUGR baby. Postterm infants are larger than term infants and have a higher incidence of fetalmacrosomia (2.5-10% in postterm versus 0.8-1% at term) this was stated by Spellacy et al Rosen and Dickinson.[5]

As per various studies, NICU admission rate is increased in postdated pregnancies. Most common indication being of NICU admission being asphyxia neonatorum.

Risks such as stillbirth, passage of meconium, and neonatal acidemia have been described as being greater at 41 and even 40 weeks of gestation as compared to 39 weeks gestation Caughy et al, Caughey and Musci.[9,10]

4. CONCLUSION:

Considering the maternal and neonatal morbidity associated with prolonged pregnancy, pregnancy should not be allowed to go postterm. The patient should be counselled about risk of increasing gestational age. These women should be offered induction of labor before 42 weeks of gestation to avoid adverse neonatal consequences.[3]The prompt commencement of labour is a key factor of perinatal outcome. Confirmation of diagnosis of postdatism is highly

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critical. In treatment of postdatism a thorough guidance and regular monitoring may minimize maternal concern and adverse effects. It is a normal practice in several centres in our nation to terminate most of the post-dated pregnancy by caesarean section due to limits of foetal monitoring system and oxytocin titration. If we would have contemporary facilities regarding infusion and foetal monitoring system like automated infusion pump, cardiotocography, foetal scalp blood pH study etc. Then caesarean section incidence might be lowered. Induction of labour in the context of a mature cervix and good foetal presentation seems to offer minimal danger to mother or foetus. Women with straightforward pregnancies should be given induction of labour, whereas women with any complicating conditions LSCS should be explored. The bad result may be decreased by making correct gestational age and diagnosis of beyond term gestation as well as assessment and treatment of risk factors.[2,4]

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