

Common modes of delivery among women with pregnancy exceeding beyond 42 weeks

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Abstract

Background: Accurate pregnancy dating is critical to the diagnosis of post-term births. Routine use of first trimester ultrasound to confirm pregnancy dating can decrease occurrence of post-term birth. Due to lack of awareness of early dating ultrasound scan in periphery, most of the patients were referred to teaching hospitals for proper management and this study was conducted to determine the frequency of common modes of delivery among women presenting with pregnancy exceeding beyond 42 weeks in our population.

Material and Methods: This descriptive study was conducted in the department of Obs & Gynaecology in Khyber Teaching Hospital, Peshawar over a period of four years from January 2012 to December 2015. A total of 205 cases were included in the study using 7% proportion of cesarean section among women with pregnancy exceeding beyond 42 weeks, consecutive (non probability) sample technique was used. All women with pregnancy exceeding beyond 42 weeks of gestation, age range from 20 to 45 years having any gravidity or parity were included and women with placenta previa or placental abruption, chronic hypertension, pre-eclampsia, diabetes mellitus, polyhydramion, previous cesarean section, fetus with umbilical cord around the neck or mal-presentation or congenital anomalies diagnosed on abdominal/vaginal examination were not included in the study. Demographic features, clinical presentation, investigations, non-operative management, any surgical intervention, were noted in a pre-designed performa.

Results: A total of 205 patients with prolonged pregnancy were studied. Mode of delivery was observed as 20 (9.8%) patients had cesarean sections, 41 (20%) patients had instrumental delivery and 144 (70.2%) patients had spontaneous vaginal delivery with no maternal mortality.

Conclusion: It can be stated that most of patients undergoing labour induction at 42+ weeks gestation deliver by normal vaginal delivery with good outcome.

Keywords: Spontaneous vaginal delivery, instrumental delivery, cesarean section, multi-gravida

Introduction:

Post-term pregnancy refers to a pregnancy that extends to or beyond 42 completed weeks of gestation, it occurs with approximate frequency of 3-12%.¹

Accurate pregnancy dating is critical to the diagnosis of post-term births.^{2,3} Routine use of ultrasound to confirm pregnancy dating can decrease occurrence of post-term birth.⁴ Common risk factors for post-term birth include obesity, nulliparity and prior post-term birth and rare

causes include placental sulphatase deficiency (an X-linked recessive disorder characterized by low estriol levels), fetal adrenal hypoplasia or insufficiency and trisomy 16 and 18.²⁻⁶

The studies investigating effects of post-term birth have focused on the risks during pregnancy and delivery.⁷ Post-term pregnancy is also linked with various maternal risks which include: emergent cesarean delivery, vacuum extraction or forceps delivery, cesarean section.⁸

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Studies show that cephalopelvic disproportion, cervical rupture, perianal lacerations, post-partum hemorrhage, dystocia, chorioamnionitis, and endomyometritis had increased frequency beyond 40 weeks of gestation; and after labor induction cesarean sections were more frequent in the group at 41 completed weeks than at 40 weeks to 40 weeks plus 6 days.⁸⁻¹⁰ In one study, 33% of women with post-date pregnancy delivered spontaneously, 60% were induced and 7% were subjected to cesarean section. Of those induced, 45% had instrumental delivery (forceps/vacuum).¹¹

The current study is designed in order to determine the common modes of delivery among women presenting with duration of pregnancy exceeding 42 weeks. The results of this study will generate local statistics about the modes of delivery in our local population as this type of study has not yet conducted before here. The results of this study will be very useful in making future recommendations and suggestions regarding management of women with post date pregnancy. The results of this study will be disseminated among local obstetricians so that future areas of research work into similar aspect may be identified before coming on to conclusions regarding modifications in current management principles for women with post date pregnancy.

Objective:

To determine the frequency of common modes of delivery among women presenting with pregnancy exceeding beyond 42 weeks in our population.

Materials and Methods:

This descriptive study was conducted in the department of Obstetrics & Gynaecology in Khyber Teaching Hospital, Peshawar over a period of four years from January, 2011 to December, 2014.

All women with pregnancy exceeding beyond 42 weeks of gestation, age range from 20 to 45 years having any gravidy or parity were included and women with placenta previa or placental abruption, chronic hypertension, preclamap-

tia, diabetes mellitus, polyhydramion, previous cesarean section, fetus with umbilical cord around the neck or malpresentation or congenital anomalies diagnosed on abdominal/vaginal examination were not included in the study. All women meeting the inclusion criteria and presenting to labor room with duration of pregnancy exceeding beyond 42 weeks of gestation presented in labor were invited to participate in the study and were admitted for further management. Consecutive (non probability) sample technique was used.

All women were subjected to detailed history and clinical examination followed by routine investigations. Patients with unfavorable cervical bishop's score less than 5/10 was induced with prostaglandin E2 tablet. Second and 3rd tablet was repeated after 6 hour's respectively if needed. Patients presenting in spontaneous was confirmed as in active phase on the basis of a minimum cervical dilation of 3cm. Augmentation of labour with 5 units oxytocin was done if cervical dilation is less than 1cm/ hour. All women were subjected to ultrasound to detect fetal distress. All women were followed under supervision of an expert obstetrician fellow of CPSP to determine the common modes of delivery (spontaneous vaginal delivery, instrumental delivery and cesarean section).

All above mentioned information were recorded in a pre-designed proforma. Strictly exclusion criteria were followed to control confounders and bias in the study results.

Data were entered and analyzed using SPSS version 19.0. Categorical variables like common modes of delivery (spontaneous vaginal delivery, instrumental delivery and cesarean section) were described in terms of frequencies and percentages. Quantitative variables like parity, age and gravida were described as mean±standard deviation. Common modes of delivery were stratified among age, gravidy and parity to see effect of modifications. All results were presented in tables and diagrams.

Table-1: Age wise distribution (n=205)

Age in years	Frequency	Percent	Cumulative percent
≤ 25.00	53	25.9	25.9
26.00 - 30.00	69	33.7	59.5
31.00 - 35.00	17	8.3	67.8
36.00 - 40.00	36	17.6	85.4
≥ 41.00	30	14.6	100.0
Total	205	100.0	

Mean age was 30.72 years± .45

Table-2: Gravida (n=205)

Gravida	Frequency	Percent	Cumulative percent
≤ 1.00	90	43.9	43.9
2.00 - 5.00	74	36.1	80.0
≥6.00	41	20.0	100.0
Total	205	100.0	

Table-3: Parity (n=205)

Parity	Frequency	Percent	Cumulative percent
Nullipara	143	69.8	69.8
Primary para	41	20.0	89.8
Multipara	21	10.2	100.0
Total	205	100.0	

Table-4: Mode of delivery (n=205)

Mode of delivery	Frequency	Percent	Cumulative percent
Spontaneous Vaginal Delivery	144	70.2	70.2
Instrumental Delivery	41	20.0	90.2
Cesarean Section	20	9.8	100.0
Total	205	100.0	

Table-5: Age wise stratification of mode of delivery (n=205)

Mode of delivery	Maternal age (in years)				p-value
	≤ 35.00		≥ 36.00		
	Count	%	Count	%	
Spontaneous Vaginal Delivery	97	67.4%	47	32.6%	0.970
Instrumental Delivery	28	68.3%	13	31.7%	
Cesarean Section	14	70.0%	6	30.0%	

Table-6: Para wise stratification of mode of delivery (n=205)

Mode of delivery	Parity				p-value
	Primary para		Multipara		
	Count	%	Count	%	
Spontaneous Vaginal Delivery	129	89.6%	15	10.4%	0.644
Instrumental Delivery	38	92.7%	3	7.3%	
Cesarean Section	17	85.0%	3	15.0%	

Results:

A total of 205 patients with prolonged pregnancy were included in the study. Maternal age analysis with mean age are shown in (Table No 1). Gravidity among 205 patients was observed and shown in (Table No 2).

The distribution of maternal parity among the study population is shown in (Table No 3). Mode of delivery among the patients are shown in (Table No. 4). Stratification of mode of deliveries over age and parity are shown in (Table No. 5 and 6).

Discussion:

Although it is established fact that both maternal and fetal risk increases with prolonged gestation but still there is considerable disagreement over the management of post-term pregnancies. The main controversy is whether to adapt a policy of routine induction or one of selective induction with frequent fetal surveillance.¹²⁻¹⁴

Various studies are conducted at various times to find any difference between the two plans of management i.e. either to induce at 41 weeks or follow expectant management in post-term in regard to neonatal morbidity and they found no difference between both plans of management.¹⁵⁻¹⁹

Most important factor in post-term pregnancy is accurate assessment of gestational age. In our study 34% cases had gestational age ranges between 41+5 to 41+6 weeks, 35% percent cases had gestational age ranges between 41 to 41+4 weeks and 31% cases had gestational age above 42 weeks. The same results were shown in the study done by Richard FT, 38% cases had gestational age ranges between 41+5 to 41+6 weeks, thirty four percent cases had gestational age ranges between 41 to 41+4 weeks and 28% cases had gestational age above 42 weeks.²⁰

In our study most of the cases were primary gravida 51% and Multi gravida 40% and only 9% cases were grand multigravida. The same results were shown Caughey AB, in his study primary gravid 56%, 42% were multi gravid and only 2% cases were great grand multigravida, which shows strong association of parity in post term pregnancy.²¹

Our study shown that most of the cases i.e. 76% were delivered by spontaneous vaginal delivery, 15% were delivered by caesarean section and

9% were delivered by vacuum vaginal delivery. The same results were found in study done by Spellacy WN in which spontaneous vaginal delivery was observed in 80% cases, Caesarean section was in 12% and 8% delivered by vacuum vaginal delivery. Similar figures are also quoted by Aaron B.²² Caesarean section itself carries its own morbidity and mortality thus making post dates a high risk pregnancy.²³

Conclusion:

Post-term pregnancy can be managed with normal vaginal delivery with good outcome.

Conflict of interest: None

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Role and contribution of authors:

Dr. Ambareen Samad, principal author Idea, data collection

Dr. Muhammad Naeem, Data analysis

Dr. Talat Naz, literature search

Dr. Naheed Akhtar, references

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