

POST TERM PREGNANCY PREVALENCE

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ABSTRACT

Background: The normal Pregnancy period is 280 days or 40 Weeks; the global Incidence of Post-date Pregnancy is about 5-10% which is mostly seen in Primipara Women. The Term Post-date Pregnancy is used when the duration of Pregnancy Exceeds 40 weeks in other words. the pregnancy is known as post pregnancy if its duration exceeds 42 weeks., The incidence of Post-term pregnancy is about 2-14% but it may be different in various Countries. in Post-Term Pregnancy despite the mortality and morbidity of the fetus and newborn there is a higher risk of Maternal Mortality and morbidity such as Labor Dystocia, Severe laceration of the perineum and Cesarean section.

Materials and Methods: This Research was performed in Nangarhar University Teaching Hospital Gynecology and Obstetrics Ward from 22/05/202 – 22/08/2021. During the research period 2549 patients were admitted to the hospital. Among these patient, we had found 58(2.3%) post term pregnancy and average age of these patients were 31.3 years 2491 The rest patients (97.7 %) had other pregnancies.

Findings: Among 58 post terms, 51 (87.9%) of the patients were Multipara and 7 (12.1%) of the patients were Primipara.

The neonatal complication of the post term pregnancy was such as meconium aspiration syndrome 8 (13.8%), Shoulder Dystocia 5 (8.6%), stillbirth 4 (6.9%) and neonatal asphyxia 4 (6.9%). but fortunately there was no complication in majority of the newborns 37 (63.8%).

Maternal Complications of the Post-Term Pregnancy
Include oligohydramnios 19 (32.8%),

Perineal Laceration 12 (20.7%), Post-Partum Hemorrhage 6 (10.3%), Macrosomia 3 (5.2%).

Fortunately, there were no complication in 18 (31%) Patients.

According to the delivery method 35 (60.4%) patients had Normal Vaginal Delivery, 16 (27.6%) patients delivered their babies through Cesarean section, 5 (8.6%) patients needed Assisted Delivery and 2 (3.4%) patients went through normal vaginal delivery with episiotomy.

It is worth mentioning that the Average Weight of the Newborns was 3.5Kg.

Type of study was descriptive Cross Sectional of method

Conclusion: This Research has been performed in Nangarhar University Teaching Hospital Gynecology and Obstetrics Ward from 22/05/2021 – 22/08/2021. During the research period 2549 patients were admitted in hospital among these patient we had found 58(2.3%) post term pregnancy and average age of these patients were 31.3 years and 2491 patients 97.7 % had other pregnancies.

Keywords: post term pregnancy, maternal and newborn complication of post term pregnancy

Introduction

The normal Pregnancy period is 280 days or 40 Weeks; the global Incidence of Post-date Pregnancy is about 5-10% which is mostly seen in Primipara Women. The Term Post-date Pregnancy is used when the duration of Pregnancy Exceeds 40 weeks on the other hand if the duration of pregnancy exceeds 42 weeks then its known as Post-Term Pregnancy, the incidence of Post-term pregnancy is about 2-14% But it may different in various Countries ^[1] in Post-Term Pregnancy despite the mortality and morbidity of the fetus and newborn there is a higher risk of Maternal Mortality and morbidity such as Labor Dystocia, Severe laceration of the perineum and Cesarean section, the primary goal of this research is to identify the cases of Post-Term Pregnancy in all obstetrical Patients. ^[2]

This Descriptive Cross Sectional Research has been performed in those patients that were hospitalized in Obs/Gyn Ward of Nangarhar University Teaching Hospital during 22/05/2021 – 22/08/2021. At the end of the research we have found that 2549 pregnant women were admitted among all those patients 58 (2.3%) of them were Post-Term Pregnancy and 2491 pregnant women had other pregnancy. the average age of these 58 patients were 31.3 years, among 58 patients 51 (87.9%) of them were Multipara and 7 (12.1%) of theme were Primipara. The neonates that were born from a Post-Term Pregnancy had multiple complications such as Meconium Aspiration Syndrome in 8

(13.8%), Shoulder Dystocia in 5 (8.6%), stillbirth in 4 (6.9%) and Asphyxia in 4 (6.9%) but fortunately there was no complication in majority of the newborns 37 (63.8%). Maternal Complications of Post-Term Pregnancy Includes oligohydramnios in 19 (32.8%) patients, Perineal Laceration in 12 (20.7%) patient, Post-Partum Hemorrhage in 6 (10.3%) patients, Macrosomia in 3 (5.2%) and fortunately in 18 (31%) Patients there was no complication. According to the method of the delivery 35 (60.4%) patients had Normal Vaginal Delivery, 16 (27.6%) patients delivered their babies through C/S, 5 (8.6%) patients needed Assisted Delivery and 2 (3.4%) patients went through normal vaginal delivery with episiotomy. It worth mentioning that the Average Weight of the Newborns was 3.5Kg.

Basic Goals of the Research:

- Identification of Post-Term Pregnancy in Obstetrical Patients

The Sub-Goals of the research:

- To identify maternal complication
- To explain the type of delivery in post term pregnancy

Need and Importance of the Research:

- Finding the cases of Post-Term Pregnancy in the community
- Recognizing the Risk Factors of the Post-Term pregnancy in the community
- Lowering maternal and newborn mortality and morbidity of the Post-Term

Pregnancy by some basic management approaches

Which factors act as Risk factors for Post-Term Pregnancy?

The exact cause of Post-Term Pregnancy is unknown but the most common risk factor is to make mistake in counting the Last Menstrual Period by a Pregnant woman^[3]. Having past history of Post-Term Pregnancy, Advanced age, Prim gravidity, obesity, Genetically Defects are other factors that may lead to Post-Term Pregnancy. Some Fetal anomalies such as Anencephaly and Fetal Adrenal Hypoplasia are predisposing for Post-Term Pregnancy^[2]. In normal full term fetus, the Estrogen Precursor is secreted by Fetal Adrenal gland which is converted to estrogen by placental Sulphatase enzyme, in case of Fetal Adrenal hypoplasia the estrogen precursor is either low or absent, hence the initiation of the Labor is highly dependent on low Estrogenic Environment which is not obtained because of Fetal Adrenal Hypoplasia, Thus the pregnancy may extend further and result in Post-Term Pregnancy. Placental Factors such as Sulphatase Deficiency may also extend the pregnancy resulting in Post-Term Pregnancy.^[4]

Physiological Changes of Post-Term Pregnancy:

1. Placental Changes

- Arteriosclerosis

- Infarction
- Placental Aging
- Calcification

2. Amniotic Fluid Changes

• Quantitative: the amount of amniotic fluid might be decreased and causes oligohydramnios

• Qualitative: such as the discoloration of the amniotic fluid due to Meconium Discharge

3. Fetal Changes

- Overweight: in 45% cases
- Normal weight: in 15% cases
- Underweight: in 40% cases

Maternal Complications of Post-Term Pregnancy

✚ Pregnancy is a physiologic process and it is accompanied with some short term Symptoms thus every mother wants to complete the period of their pregnancy safely, but if the duration of the pregnancy exceeds its normal interval may result in anxiety and depression

✚ The delivery of overweight fetus may traumatize genital tract resulting in Grade I to Grade IV laceration of the perineum

✚ Delivery of overweight fetus is sometimes associated with Shoulder Dystocia

✚ PPH is a threatening complication that occurs after delivery

✚ Higher incidence of operative delivery ^[2]

Fetal Complications of Post-Term Pregnancy

✚ Oligohydramnios: low levels of amniotic fluid may cause fetal distress

✚ Meconium aspiration syndrome: is a condition in which fetus aspirate meconium in intra-uterine life. During stress the pituitary gland of the fetus secretes Arginine Vasopressin to relax the smooth muscles of the intestines, this results in discharge of the meconium into the amniotic cavity and change the color of the amniotic fluid

✚ Fetal trauma such as bone fractures, Shoulder dislocation and brachial plexus injury

✚ Higher incidence of Perinatal Death ^[5]

Prevention

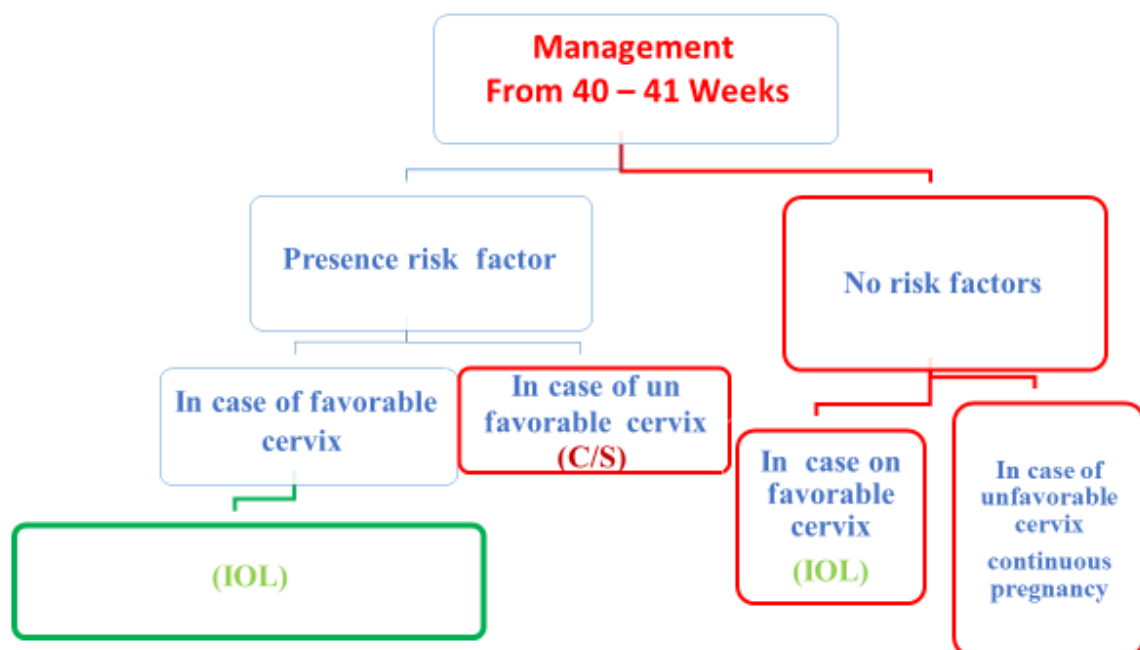
- Induction of labor
- Swiping of the membrane

- Sexual intercourse ^[6]

Management of Post-Term Pregnancy

treatment of Post-Term Pregnancy is dependent upon the findings of Pervaginal examination, outcome of the Fetal Wellbeing Evaluation and the presence of pregnancy related risk factors in mothers. ^[7]

The treatment plan of a Post-Term Pregnancy with 40-41 weeks of gestation is described in the following diagram:



If there is no complication During 41st week of gestation, we should wait and perform following activities for evaluation of the mother and fetus:

1. NST (Non stress test) twice per week
2. Fetal kick count per day
3. BPP twice per week

After 42nd week of gestation we shouldn't wait and terminate the pregnancy

Intra-Partum Management of Post-Term Pregnancy

- Left lateral position
- CTG continuously
- ARM (Artificial rupture of membrane)
- Amnioinfusion 750-1000mg of Normal Saline or Ringer Lactate in case of meconium stain Liquor ^[7]

Methodology

This is a Hospital based Descriptive Study that was performed in Nangarhar university teaching hospital during 22/05/2021 – 22/08/2021. For the sampling of the patients we

consecutively completed the history files of the patients who were hospitalized in Obs/Gyn ward for delivery, in the history files we have written all the important information about the patients, after then we performed obstetrical physical examination, measured the vital signs of the patients and performed an U/S examination to determine the gestational age of the hospitalized patients. If the gestational age of the patient was 40 weeks and the U/S was normal we have counselled with these patients to wait for delivery and discharged from hospital after their consent. The patients with gestational age of ≥ 42 weeks have been taken under the management for their delivery, these patients were further subdivided into two categories according to their cervical predisposition in 1st category the patients easily initiated their Labor process by medical treatment in 2nd category, patient's uterine cervix was not completely able for delivery then these patients were prepared for Caesarean section. the maternal or neonatal complications were written in questionnaire and the patients were under observation for PPH for 24 hours after the delivery

Research Materials:

1. Patients
2. Complete history of the patients (file)
3. Ultrasound device
4. Laboratory exams
5. Research form
6. Consent letter

Inclusion criteria

▪ All pregnant women that were hospitalized for delivery, were included in this research

Exclusion criteria

- Pregnant women with breech presentation
- Women with multiple pregnancy
- Pregnant women that were performing precipitative delivery
- Pregnant women with past history of C/S
- Pregnant women that have DM

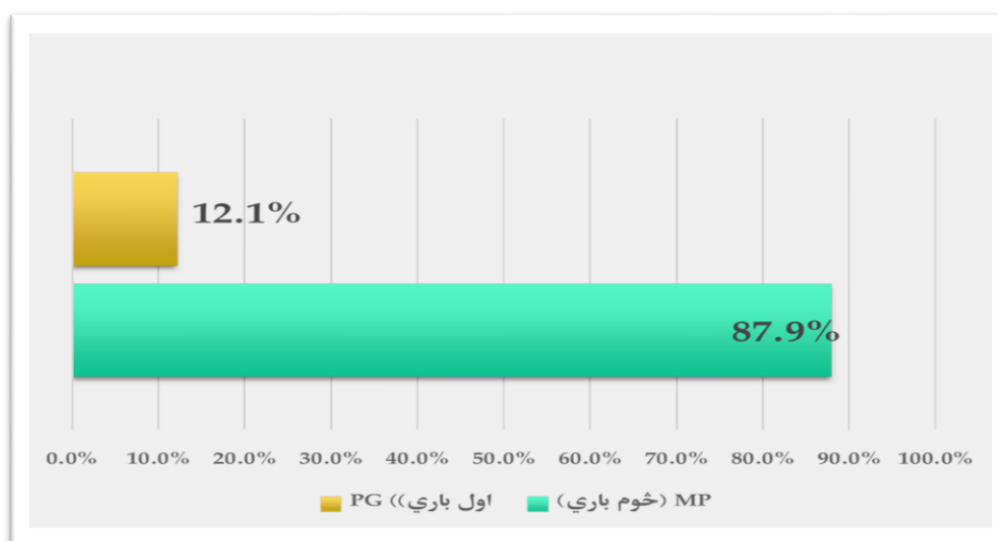
Conclusion

This Research was conducted on those patients that were hospitalized in Obs/Gyn Ward of Nangarhar University Teaching Hospital. at the end of the research, we have found that among 2549 pregnant women 58 (2.3%) of the patients had Post-Term Pregnancy in which most of

them were multipara, and the remaining 2491 patients were having normal pregnancy.

At the end of the research, we found that among 2549 pregnant women 58(2.3%) were having Post-term pregnancy and 2491 were having normal pregnancy: among these 2.3% Post-term pregnant women, 12.1% were Primipara and 87.9% were multipara.

Incidence of Post-term pregnancy according to numbers of Deliveries is shown below:



according to the age of these 58 Post-term pregnant women the age of 37 of them was between 20-30 years and the age of 21 was between 31-45 years.

The results of fetal complications of Post-term pregnancy in our research are as following: meconium aspiration 8(13.8%), Shoulder Dystocia 5(8.6%), Dead fetus and Asphyxia 4 (6.9%) and 37(63.8%) women delivered their babies without complications.

The results of maternal complications of Post-term pregnancy in our research are as following:

Oligohydramnios 19(32.8%), perineal laceration 12(20.7%), Postpartum hemorrhage 6(10.3%), macrosomia 3(5.2%) and 18(31%) of these women didn't have any complication.

The results of delivery method among these 58 Post-term pregnant women in our research are as following: C/s 16(27.6%), assisted delivery 5(8.6%), Normal vaginal delivery 35(60.4%) and normal delivery with episiotomy 2(3.4%)

Discussion

A research that was performed during 2015-2016 in 170 Patients of a tertiary care hospital in INDIA with average age & SD of 24.12 ± 13 , Data revealed that in 2 (1.14%) women the duration of pregnancy was ≥ 42 weeks which was detected by U/S Examinations. According to the type of delivery 68.8% delivered their babies through normal vaginal delivery, 3% of the women delivered their baby through instrumental delivery and 28.2% women delivered their babies through C/S.^[8] this research has approximately similar results as our research, in this country the frequency of assisted delivery is 3% which is lower than our country's assisted delivery frequency the probable reason is lack of mindset clarity towards C/s in our society that's why our Obs/Gyn specialist choose assisted delivery as an alternative procedure for C/s.

Another research that was performed during 2012-2016 in 8302406 patients of 438 Health Clinics in CHINA, Data revealed that Post term pregnancy was detected in 72393 (1.16%) women with maternal age of 20-49 years, among these post term pregnant women 12037 (60.3%) women were multipara^[9]. this research has approximately same results as our research, Maternal complications is higher in our country. The probable reason is that our society women do not consent for C/s easily, thus normal vaginal delivery in a Post-term pregnancy may results in different complications

Another research that was performed during 5 years in 23524 pregnant women of Tertiary university-affiliated medical center in ISRAEL, data revealed that the incidence of post term pregnancy was 3.2%. among these pregnant women, 81.3% delivered their babies through spontaneous vaginal delivery, 9.6% women delivered their baby through instrumental delivery, 8.9% women delivered their babies through C/S, 20% of the newborns were dead and obstetrical trauma was present in 3.6% cases.^[10] The frequency of operative delivery in our country (27.6%) is higher than the Israel (8.9%). The reason behind Low C/s numbers in Israel is regular ante-natal cares or performing CTG in high risk pregnant women. That's why operative delivery is the safest procedure for them. Other countries have the facilities for standard ante-natal cares They can assess vaginal delivery and perform C/s in case of harm and danger.

Suggestions

- In order to detect the exact gestational age, we kindly request all OBS/GYN doctors to Examine all pregnant women accurately.

- In order to avoid feto-maternal complications the OBS/GYN doctors must help all the pregnant women that are having Post Term Pregnancy.
- In order to detect and prevent expected complications of Post Term Pregnancy the delivery of the post term pregnant women must be performed by an OBS/GYN specialist.
- In order to detect the exact gestational age by a pregnant woman, public awareness is required to all pregnant women.
- Health Education is necessary for all pregnant women to diagnose & Treat pregnancy related complication, the OBS/GYN doctors should recommend pregnant women to visit near health center for Antenatal care

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