ASSESSMENT OF PREGNANCY OUTCOME IN PRIMIGRAVIDA: COMPARISON BETWEEN BOOKED AND UN-BOOKED PATIENTS

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Background: Primigravida (PG), defined as a woman who conceives for the first time, is in a high-risk group. Objective of this study was to evaluate the pregnancy outcome in booked and un-booked primigravida. **Methods:** This was a hospital based comparative study conducted in Women and Children Hospital Abbottabad from May 1998 to November 1999. A total of 322 patients were included in the study. Inclusion criteria was all primigravida, both booked as well as un-booked patients. Evaluation was done by taking detailed history, clinical examination and relevant investigations. Antenatal, intrapartum and postnatal complications were noted in the mothers. Perinatal morbidity and mortality was assessed in both the groups. **Results:** Out of 322 cases, 52 patients were booked and 270 patients were un-booked. Majority of un-booked patients belonged to the rural areas and were from lower socioeconomic group, between the age group of 15–35 years. The rate of instrumental deliveries was high (87.5%) in un-booked patients as compared to booked patients (12.5%). Caesarean section rate in un-booked patients was higher (76.5%) as compared to booked patients (23.5%). Twenty-three (20%) patients of un-booked group presented in emergency mainly with obstructed labour. Twenty-two (19.8%) patients had pregnancy induced hypertension, while foetuses of 48 (43.2%) patients developed foetal distress. Antipartum haemorrhage was present in 12 (10.8%) patients, while prolonged labour with foetal distress was noted in 26 (23.4%) patients in un-booked group. Postpartum haemorrhage and puerperal pyrexia was more common in un-booked patients (7.7% and 18.6% respectively). Perinatal mortality was high in un-booked patients (19.5%) as compared to booked patients. **Conclusion:** Primigravida are high-risk patients. Comprehensive antenatal care should be provided in this group of patients to have better maternal and foetal outcome.

Keywords: Primigravida, Pregnancy, Outcome, Complications, Women, Antenatal, Maternal, foetal

INTRODUCTION

Primigravida (PG) is defined as, a woman who conceived for the first time and they are a high-risk group. Since, it is the start of a new life for a woman, it is regarded as a crucial group who needs regular assistance in terms of Antenatal, natal and post natal care, and this will help these patients during pregnancy, labour and puerperium.[1]

Primigravida is important regarding subsequent obstetrical performance. Unfortunately, much importance is not given to this aspect of women's health. Major factors behind this are lack of education especially health education, lack of provision of health services, lack of awareness, regarding importance of antenatal care, lack of proper referral system resulting in mismanagement of patients during antenatal and postnatal period.[2] Moreover people trust their local birth attendants. Due to lack of education they have got misconception regarding immunisation, medical checkups and investigations which keep them away from due care during pregnancy and labour.[3,4] In some cases religious and cultural factors in the community are responsible for improper antenatal care.

PATIENTS AND METHODS

Both booked and un-booked primigravidas were included in the study. The booking criteria were, at least having three visits in pregnancy after 20 weeks of gestation. Detail history, clinical examination, physical findings and investigations were recorded in special proforma.

History included age of the patient, her education and socioeconomic status. History of previous Antenatal checkups in the pregnancy, any risk factor in pregnancy, especially Hypertension, gestational diabetes, bleeding in early pregnancy or later on, anaemia, sluggish foetal movement, and intrauterine growth retardation of the foetus. Past medical and surgical history was taken in detail any medical disorder associated with pregnancy was noted. Detail family history was taken especially, family history of congenital abnormality in the babies, history of blood transfusion. Detailed examination included general physical examination giving importance to the general health of the patient, her height and weight was recorded and body mass index was calculated according to standard formula[5]. Clinical assessment was done regarding presence of jaundice, enlarged thyroid and Oedema feet. Auscultation of heart and chest was concisely done in all the patients to find out any murmur or audible sound in heart. Chest detailed systemic examination was carried out in each patient.

Per abdominal examination was done for the assessment of fundal height and its correlation was done with period of gestation according to mothers' dates' foetal lie and presentation was noted. Clinical assessment of foetal weight and volume of liquor was done. Foetal heart sounds were auscultated. In labouring mothers record of uterine contraction was made and detailed pelvic examination was done to assess the stage of labour. Investigations done in all the patients included, checking of blood group and rhesus factor, haemoglobin percentage, random blood sugar, routine urine analyses, hepatitis B and hepatitis C status and detailed ultrasound examination. Specific investigations were done relevant to medical disorders if present in any patient.

RESULTS

A total of 322 patients were included in the study, among them 52 patients were booked and 270 patients were un-booked, age group ranged from 15–35 years. Majority of the patients were between age group 21–30 years. It is alarming to observe that all the patients whether booked or un-booked were anaemic, 42 of them were severely anaemic. Out of the total, 280 (86.9%) patients were Rh-positive and 42 (13.1%) were Rh-negative, (Table-1).

Mode of delivery and complications in booked and un-booked cases are tabulated in Table-2. There were 194 vaginal deliveries and 128 caesarean sections were performed, 32 patients had instrumental deliveries. Incidence of complications in un-booked cases was much higher than the booked cases.

Indications for emergency CS are listed in Table-3. In majority of cases the indications were foetal distress, obstructed labour and pregnancy induced hypertension. On the other hand, hypertensive disorders in pregnancy were the most common pregnancy associated disorders in our patients, (Table-4).

Table-1: Distribution of primigravida (n=322)

Parameter	Patients	Percentage
Age		
15–20	60	18.6
21–25	77	23.9
26–30	136	42.3
31–35	49	15.2
Degree of Anaemia (Hb G/dL)		
Mild (9–10)	180	55.9
Moderate (7–8)	100	31.1
Severe (<7)	42	13.0
Rh Blood Groups		
Rh-positive	280	86.9
Rh-negative	42	13.1

Table-2: Mode of delivery and complications in booked and un-booked cases

	Booked n=52	Un-booked n=270
Mode of Delivery		
Vaginal deliveries (n=194)	22 (11.3%)	172 (88.7%)
Caesarean section (n=128)	30 (23.5%)	98 (76.5%)
Instrumental deliveries (n=32)	4 (12.5%)	28 (87.5%)
Complications		
Post partum Haemorrhage	7 (13.5%)	25 (9.3%)
Puerperal Pyrexia	12 (23%)	60 (22%)
Wound Infection	0	20 (7.4%)
Gapped Episiotomy	0	3 (1.1%)
Hysterectomy	0	2 (0.74%)

Table-3: Indications for emergency caesarean in primigravida (n=111)

Emergency Indications	Patients	Percentage
Cephalo-pelvic disproportion	18	16.2
Obstructed labour	23	20.7
Primigravida with eclampsia	10	9.0
Pregnancy induced hypertension with foetal distress	22	19.8
Ante-partum Haemorrhage	12	10.8
Prolong labour with foetal distress	26	23.4

Table-4: Associated pregnancy disorders in primigravida (n=322)

Disease	Patients	Percentage
Hypertensive disorder of pregnancy	47	14.5 %
Eclampsia	12	3.7 %
Cardiac disease	2	0.6 %
Hyperemesis	10	3.1 %

DISCUSSION

Majority of our patients were in age group 21–30 years showing that the trend of early marriages is reduced. It is the age group where the obstetric complications are usually less. Majority of the primigravida had no previous booking. This shows lack of awareness and provision of antenatal services in our community.

Proper antenatal monitoring during first pregnancy helps in avoiding problems associated with Rh incompatibility if the baby is Rh-positive. This is only possible if the patients, especially the primigravida are booked for antenatal care.

Common problems seen in our un-booked primigravida patients result in poor perinatal outcome and maternal morbidity. All are avoidable complications and can be prevented through good antenatal monitoring, planned and supervised labour and puerperium.

Anaemia was observed in almost all patients whether booked or un-booked ranging from mild to severe. Anaemia in women is mainly iron deficiency which reflects lack of adequate nutrition to the women. It is a major cause of premature labour, and low birth weight that are major causes of perinatal

mortality. It is also a major cause of maternal mortality in Pakistan.[6,7]

Estimated maternal deaths from anaemia in Pakistan are as high as 194 per 100,000, and in combination with obstetrical haemorrhage account for 17 to 46 percent cases of maternal deaths.[8,9]

Majority (111/128) caesarean sections in our study were emergency. In a study carried out in Al-Khobar, Kingdom of Saudi Arabia the rate of emergency and planned C/S was 3.2% and 14.3% respectively.[10] The higher rate of emergency CS and instrumental deliveries in our study in due to the fact that most of the patients belonged to un-booked group. This higher percentage is due to lack of health education, poverty and absence of patient counselling prior to the planning of mode of delivery particularly in primigravida.

The most important indication for C/S in our study was prolonged labour with foetal distress followed by obstructed labour. Similar findings have been reported in a study carried out in the provincial capital Peshawar.[11] In a study carried out by Alberg and his associates a narrow pelvic outlet has been found to be associated with increased risk of emergency CS due to protracted labour.[12] They have recommended postpartum pelvimetry to decide the route of delivery in forthcoming pregnancies.

The postoperative complications in our un-booked patients were much higher as compared to booked group. Puerperal pyrexia was the most common complication followed by postpartum haemorrhage. This could have been avoided had the patients been booked for antenatal care. Al-Zirqi and his associates have reported higher risk (55%) of post partum haemorrhage for emergency CS and lower for vaginal deliveries (27%) as compared with planned CS.[13]

The main causes of perinatal mortality in our study were obstructed labour, septicaemia, APH, birth trauma congenital anomalies and prematurity and breech with stuck head. These complications resulting in perinatal deaths were due to lack of antenatal, intranatal and postnatal care particularly in un-booked patients.[14,15]

High maternal mortality in different studies has been reported mainly among un-booked patients due to postpartum haemorrhage, puerperal pyrexia, wound infections and anaemias.[16] In the present study extended over a period of 18 months, no maternal mortality was recorded. This could be possible only through provision of tertiary health care at our setup.

Lack of woman's education, health education, lack of awareness regarding importance of ante-natal and post natal check ups, lack of proper referral system, lack of provision of equal health services to all are responsible for the above complications. It is therefore proposed that all primigravida must be delivered at tertiary level hospital. All primigravida should have at least three ante-natal checkups by consultants and delivery at district level hospitals, with all facilities for C/S if required.[7]

CONCLUSION

Primigravida are high-risk patients. Comprehensive antenatal care should be provided to this group of patients to have better maternal and foetal outcome.

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