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Antenatal care: A Descriptive study of 400 cases and its impact on maternal and perinatal outcome.

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Abstract:

Background: Antenatal care refers to the care given to women during pregnancy and child birth to achieve at the end of pregnancy a healthy mother and a healthy child. It is one of the important factor to reduce maternal morbidity and mortality. **Objective:** To identify the determinants of antenatal care (ANC) attendance and to describe the maternal and perinatal outcome. **Materials & Methods:** This study was carried out among 400 expectant mothers having last children two years or less during the period from January, 2015 to December, 2015 who attended the ANC care unit of Rafatullah Community Hospital (RCH) attached to TMSS medical college, Bogra. **Results:** Reproductive history of women reveals that, age at marriage was between 20 to 24 years. Among the respondents, 240 (60%) had taken WHO recommended 4 or more antenatal visits and 160 (40%) 1-3 visits during the pregnancy period. All the mothers had taken TT immunization according to EPI schedule. 260 (65%) pregnant women were anaemic and 140 (35%) healthy. The respondents had developed PIH (Pregnancy Induced Hypertension) in 40 (10%), eclampsia in 8 (2%) & APH in 20 (5%) cases respectively. Retained placenta occurred in 20 (5%) cases. Of the respondents 340 (85%) had delivered normal and 60 (15%) low birth weight babies. 260 (45%) normal deliveries and 140 (35%) cesarean section deliveries were done both in multigravida and primigravida cases. Neonatal death occurred in 8 (2%) cases. **Conclusion:** Although the attendance of pregnant women to ANC is encouraging, the safe motherhood strategies need to be targeted to rural area in order to increase access to ANC and delivery care, preparing community health workers to promote ANC, improving the quality of ANC offered by doctors and nurses at primary health care level and availability of medical facilities to be strengthen.

Keywords: Antenatal care, maternal and perinatal outcome.

Introduction

Quality antenatal care is the fundamental right of expectant mothers to safe guard their health and that of their infants. Antenatal care allows management of pregnancy, detection and treatment of complications and promotion of better maternal and child health¹. The World Health Organization (WHO) defines women of reproductive age as those who are aged 15-49 years. They constitute more than one-fifth of the world's population and are repeatedly exposed to the risk of pregnancy and childbearing. According to WHO recommendation, every pregnant woman should receive at least four ANC visits during

pregnancy². The use of ANC in developing countries is low compared to developed countries (97%)³. The Bangladesh Demographic and Health survey (BDHS) 2011, showed that 55% of women with a birth in the three years preceding, the survey received ANC at least once from any provider⁴. The expectant mothers had received ANC from medically - trained provider, such as doctors, nurses, midwives and family welfare visitors. In developing countries, women often have to encounter serious health risks during pregnancy such as anaemia, oedema, eclampsia for themselves or sepsis and pneumonia, birth asphyxia, tetanus, congenital anomalies and low

birth weight for their children. These problems are prevalent due to socio-economic condition, low maternal education and lack of ANC Knowledge and practice and inaccessibility to health facilities. The wide disparity in the maternal health care indicators might explain the wide difference in the Maternal Mortality Rate (MMR) between the developed and the developing countries. Data from 2014 BDHS shows that in our country, Infant Mortality Rate (IMR) is 38 deaths per 1000 live birth and under-5 Mortality 46 per 1000 live birth while in USA IMR is 7 and under-5 Mortality Rate is 8 per 1000 live birth. The HPNSDP (MOHFW, 2011) aims to decrease IMR to 30 and under-5 mortality to 38 per 1000 live birth by 2016 respectively. Bangladesh has reduced Maternal Mortality Rate (MMR; the number of maternal deaths per 100,000 live birth) from 322 in 2001 to 170 in 2014 while in USA MMR is 21. Bangladesh is also committed to reach the Sustainable Development Goal (SDG) pertaining to reduce MMR to 70 per 100,000 live birth by 2030.⁵ Of the 210 million women who become pregnant each year, 30 million or about 15% develop complications⁶. Available information indicates that, about 5200 women in Bangladesh die due to pregnancy and birth-related complications^{5,6,7}. These complications can be managed and treated if timely and appropriate antenatal care is sought from facilities with necessary skilled care providers.

Materials and Methods

This descriptive study was carried out among the rural expectant mothers who attended the ANC unit of Rafatullah Community Hospital (RCH) attached to TMSS medical college, Bogra during the period from January, 2015 to December, 2015. The aim of this study was to describe antenatal care and maternal and perinatal outcome of pregnant women who were delivered in RCH with adequate and inadequate ANC (Ante Natal Care).

The women were interviewed using standardised questionnaires. Various antenatal investigations, types of delivery, maternal and perinatal outcome were noted. They were followed-up until delivery and the day of discharge from the hospital.

Results

A total of 400 expectant mothers were enrolled in this study. Various informations with results were shown in the tables.

Table-I. Sociodemographic profile of respondent (n = 400)

Characteristics/ variable Age group (years)	Frequency	Percentage (%)
15-19	60	15
20-24	240	60
25-29	60	15
30-34	20	5
35-39	20	5
Occupation		
Housewife	240	60
Labourer	60	15
Service	80	20
Business	20	5
Parity		
Primigravida	240	60
Multigravida	160	40
Religion of mother		
Islam	300	75
Hindu	100	25
Wealth index		
Poor	60	15
Middle	240	60
Rich	100	25
Educational status		
Illiterate	20	5
Primary	240	60
Secondary	100	25
Higher secondary	40	10

Table-II. Pattern of ANC visits & Antenatal investigations (n = 400)

Number of ANC visits	Frequency	Percentage (%)
1	20	5
2	40	10
3	100	25
4 or more	240	60
Antenatal investigations		
Screening tests for VDRL, HBsAg, HIV	400	100
Hb%, blood group & Rh typing	400	100
Ultrasonogram	400	100

Obstetric Profile (n = 400)

Delivery	Frequency	Percentage (%)
Normal delivery (vaginal)		
Multigravida	180	45
Primigravida	80	20
Cesarean section delivery		
Multigravida	40	10
Primigravida	100	25

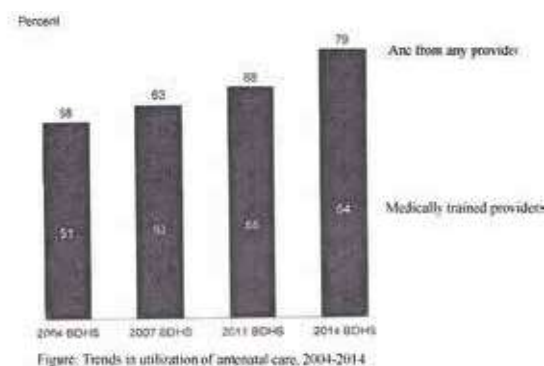
Maternal outcome		
Healthy mother	140	35
Anaemia (Hb<10gm/dl)	260	65
PIH (Pregnancy Induced Hypertension)	40	10
Eclampsia	08	02
APH	20	05
Hand prolapse	-	-
Retained placenta	20	05
PPH	-	-
Rupture uterus	-	-
Perinatal out come		
Normal baby	340	85
Low birth weight baby	60	15
Still born	-	-
Neonatal death	08	02

Among the respondents, 240 (60%) were between the age of 20-24 years. Of them, 240 (60%) were housewives, primigravida, middle class with primarily educated and 160 (40%) were multigravida. According to WHO recommendation 240 (60%) had 4 or more

antenatal visits and 160 (40%) 1-3 visits during the pregnancy period. All the expectant mothers had taken TT immunization according to EPI schedule. 260 (65%) pregnant women were anaemic and 140 (35%) healthy. The respondents had developed PIH (pregnancy Induced Hypertension) in 40 (10%), eclampsia in 8 (2%) & APH in 20 (5%) cases respectively. Retained placenta occurred in 20 (5%) cases. 340 (85%) respondents had delivered normal and 60 (15%) low birth weight babies. Both in multigravida and primigravida cases, 260 (65%) normal and 140 (35%) cesarean section deliveries were done. Neonatal death occurred in 08 (02%) cases.

Discussion

In our study 4 or more ANC visits were done by 240 (60%) and 1-3 visits by 160 (40%) respondents. The HPNSDP results framework set a target of 50 percent of pregnant women making at least four antenatal care visits to be achieved by 2016 (MOHLFW, 2011). Antenatal care from medically - trained provider is important to monitor the status of a pregnancy, identify the complications associated with the pregnancy and prevent adverse pregnancy outcome. To be most effective, there should be regular ANC throughout the pregnancy. BDHS 2014 had shown that, the percentage of birth delivery by cesarean section has been increasing from 17 percent in 2011 to 23 percent in 2015. But in our study, total cesarean section deliveries both in primigravida and multigravida cases were 140 (35%).



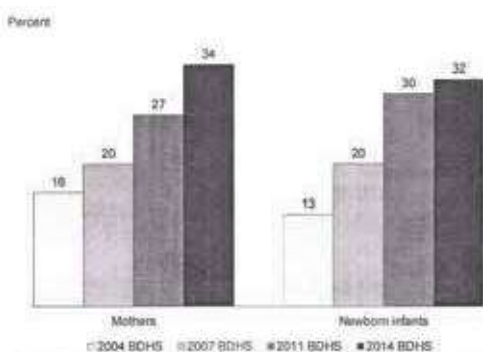


Figure: Trends in utilization of postnatal care for mothers and children from a medically trained provider within two days of delivery, 2004-2014.

According to BDHS 2014, antenatal care from any provider has increased from 68 percent in 2011 to 79 percent in 2014 and during the same period antenatal care from medically- trained provider increased from 55 to 64 percent. The proportion of deliveries by medically - trained provider has increased from 32 percent in 2011 to 42 percent in 2014 and at the sametime births delivered at health facilities from 29 percent to 37 percent⁸. The HPNSDP targets delivery by a medically trained provider to reach 50 percent by 2016 (MOHFW, 2011). BDS data 2014 also shows that 34 percent of mother and 32 percent children are receiving postnatal care by medically trained provider within the crucial first two days of delivery. The HPNSDP also sets a target of 50 percent of women to receive at least one postnatal visit by a medically trained provider within 48 hours of birth by 2016 (MOHFW, 2011). Although it can not be claimed that ANC is the only solution to control high maternal and perinatal mortality in the developing countries, but ensuring the provision of ANC may help to reduce the maternal and child mortality.

Conclusion

Expectant mother should be encouraged or motivated to attend regularly to ANC for basic medical health care services which will reduce maternal and infant mortality and morbidity.

Recommendations

Rural women are still victims of early marriage and early child birth and are prone to develop complications before, during and after delivery.

The recommendations are

- * Prevention of early marriage.
- * To improve community awareness about ANC, empowerment of women through formal or informal education, enhancing income generating activities and involment of husbands in information, education and communication.

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