

REPORT

OUTCOME OF PREGNANCY IN RELATION TO ANTENATAL CARE AT MATERNITY HOSPITAL, THAPATHALI

**Submitted to Research Committee
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Introduction

Antenatal care started century ago in France. Anne Edinburgh for the purpose of critically in pregnant with the provision of hospital accommodation. In UK it started since sixty years and reduction of maternal and prenatal mortality morbidity and disablement was obvious.

In 1993 Monroker first defined the objective of antenatal care as first " to carry the pregnant women through pregnancy with the least degree of disturbance to her general health" and second " to prepare her so that she may pass through it safely and as early as possible"1.

Antenatal clinic is not always with fixed regime but must be flexible system provided by a medical team. Doctors , Nurses, Lab technician, Radiologist and midwives. Traditionally antenatal care has concentrated first on the initial assessment of the mothers usually towards the end or after the first trimester and second or the last month when maternal complications are most likely to occur, when the foetus is becoming more viable, when the mothers pay increasing attention to the forthcoming confinement and its potential problems. These days the type of antenatal care given by different countries according to financial educational and health planning systems of the country. The effectiveness of current antenatal care has never been scientifically proven. One of the approaches to determine the effectiveness of antenatal care is ability to identify women with important non symptomatic diseases like PET HIGR Immunization asymptotic STD , Twin pregnancy etc.

Literature review

The first book which specifically addresses the subject of antenatal care was HINTS TO MOTHER FOR THE MANAGEMENT OF HEALTH DURING THE PERIOD OF PREGNANCY AND IN LYING IN ROOM WITH AN EX EXPOSURE OF COMMON ERRORS. In connection with this subject of antenatal care was written by Thomas Bull in 1837 (2). A key event in the recognition that pregnancy could be a high risk event was the paper by Ballantyne in 1901 entitled "plea for a pro Maternity Hospital"(3). It was only in 1910 there on antenatal clinic was opened. By 1950 there were 2000 ANC clinic in England and Wales and 99.1% of expected motherhood some from of ANC in England in 1984. Today ANC with development of new technology has redefined aim of preventing foetal death and congenital handicaps. The quality of and effectiveness of ANC is often judged by the number of antenatal visits and perinatal outcome is related to this number. The short coming of this approach is that the duration of the pregnancy will definitely have ulrrered the number of visits . The kessner Scoring system has been used to assess the amount of antenatal care, taking into account late attendance and or early delivery(4) care is devided into adequate, inadequate according to the gestational age (table1). Using this score Alan Guttamachi Institute reports that 10% of pregnant women in North America received inadequate antenatal care and 18% had received intermediate care (5).

In UK the routine ANC given to symptom free pregnant women includes a visit to the hospital clinic or GP early in pregnancy and followed by monthly until 30 wks gestation fortnightly until 36 weekly till delivery (2). In contrast to this Hall suggested in 1980 that for most pregnant women only five full ANC necessary with more frequent measurement of blood pressure alone in third trimester of prime gravid (6). They suggested that ANC could be redirected at women presenting with problem . Hall found in his study "Is routine ANC worth : 44% of HUGR confirmed and 88% of breech cases were detected antenatal (6). Thirty % of women developing PET presented first time in labour or perpeunium thus preventing. Antenatal diagnosis . On the other hand 256/19451 patients with transient hypertension were falsely diagnosed as PET. their BP settled after hospital admission without the need of treatment. One of the population based study " Effectiveness of Antenatal care (7) found 94% of direction rate for twins 69% of beech presentation 57% placenta previa 57% 75% of PET, only 14% SFD foetus were identified before delivery.

Objective

To find out the maternal morbidity and faetal outcome in cases who delivered in Maternity Hospital , Thapathali.

Specific Objective

1. To see the percentage of pregnant women who come for delivery in maternity hospital.
2. To find out the high risk cases identify during ANC and after admission
3. To find out about mode of delivery/complication rate in pregnant women and its fo outcome.

Methodology

This is prospective case control study done in maternity hospital, Thapathali Kathmandu. Duration of study was 6 months (from Baishak to Ashoj (2056). Structured questionnaire were filled up during the hospital stay. Data were tabulated and Analyzed manually . This paper analyses maternal morbidity in terms of Age group; parity; mode of delivery ,complication and its foetal outcome.

Inclusion Criteria

All the pregnant cases who has delivered in maternity hospital
Both high risk and non high risk cases were included

Exclusion Citeria

Patient admitted before 28 weeks pregnancy

Result

High risk & Non high risk (ANC & Non ANC Cases)

	<u>ANC Attended</u>	<u>ANC Not Attended</u>	<u>Total</u>
High Risk	- 1104 (39%)	*1127 (47.8%)	2231 (36%)
Non High Risk	- 2735 (71%)	1278 (53.2%)	4013 (64%)

<u>High Risk</u>	<u>ANC Attended</u>	<u>ANC Not Attended</u>	
* Y. Primi	317 (22.9%)	270 (24%)	587 (20%)
* PROM	98 (7.2%)	118 (10.4%)	216 (9.7%)
PET	86 (6.3%)	154 (13.6%)	240 (10.7%)
Preterm Labour	85 (6.2%)	123 (10.9%)	208 (9.3%)
Malpresentation	103 (9.3%)	96 (8.5%)	189 (8.5%)
Anaemia	19 (1.7%)	108 (9.6%)	127 (5.6%)
• Previous C/S	122 (11.05%)	79 (7.0%)	151 (6.8%)
• BOH	112 (10.1%)	69 (6.1%)	181 (8.1%)
Short Statured	80 (7.2%)	68 (6.03%)	148 (6.6%)
Rh - ve	44 (3.9%)	25 (2.2%)	69 (3.09%)
Elderly Primi	38 (3.4%)	36 (3.19%)	74 (3.3%)

Geographical Distribution

	<u>ANC Attended</u>	<u>ANC Not Attended</u>	<u>Total</u>
Rural	1800 (46.9%)	*1380 (57%)	3180 (50.9%)
Urban	* 2039 (53.1%)	1025 (43%)	3064 (49.1%)

ETHNIC GROUP

	<u>ANC Attended</u>	<u>ANC NOT Attended</u>	<u>Total</u>
• BRAHMIN	1365 (35%)	415 (17%)	1800 (28%)
• CHETRY	805 (21%)	308 (13%)	1490 (24%)
NEWAR	1065 (27%)	425 (18%)	1173 (18%)
OTHERS	604 (16%)	1257 (52%)	1861 (30%)

According to Age distribution

<u>Age group</u>	<u>ANC Attended</u>	<u>ANC Not Attended</u>	<u>Total</u>
15 -19	535 (14%)	365 (15.03)	900 (14.4%)
*20 - 24	2014 (53%)	1145 (48%)	3159 (57%)
25 - 29	745 (19%)	561 (23.2%)	1306 (21%)
*30 - 34	380 (10%)	236 (10.4%)	616 (9.8%)
35 - 39	148 (3.9%)	68 (2.8%)	216 (3.5%)
≥40	7(0.18%)	14 (0.6%)	21 (0.33%)

ANC & Parity

	<u>ANC Attended</u>	<u>ANC Not Attended</u>	<u>Total</u>
• Primi	1970 (51.3%)	1007 (26%)	2972 (48%)
Multi	1828 (48 %)	1349 (56%)	3177 (50%)
Grand Multi	36 (0.93%)	49 (2%)	85 (1.3%)

Comparison Type of Delivery
(ANC DONE and NOT DONE CASES)

	<u>ANC</u> <u>Attended</u>	<u>ANC Not</u> <u>Attended</u>	<u>Total</u>
Normal Deliveries	-*3324 (86%)	1600 (66.5%)	4924 (78.9%)
Abnormal Deliveries	- 515(13.4%)	* 805 (33.5%)	1320 (21.7%)

ABNORMAL DELIVERIES

	<u>ANC</u> <u>Attended</u>	<u>ANC Not</u> <u>Attended</u>	<u>Total</u>
LS CS	309 (8.04%)	385 (16%)	694 (52.6%)
Instrumental	139 (3.6%)	159 (6.6%)	298 (22.6%)
Preterm Delivery	68 (1.7%)	84 (3.5%)	152 (11.5%)
Twin Delivery	33 (0.85%)	11 (0.45%)	44 (3.3%)
Breech Delivery	37 (0.96%)	20 (0.83%)	57 (4.3%)

Complication During Delivery

Total Complication during delivery	-	316 (5.06%)
PPH	-	294 (93.03%)
Retained placenta	-	11 (3.5%)
III^o P tear	-	9 (2.84%)
Haematoma	-	2 (0.63%)

	<u>PPH</u>	<u>Retained Placenta</u>	<u>III^o p Tear</u>	<u>Haematoma</u>
<u>ANC</u>				
<u>ATTENDED</u>	- 135 (42.7%)	4 (1.2%)	4 (1.2%)	-
<u>ANC Not</u>				
<u>ATTENDED</u>	- 159 (50.3%)	7 (2.2%)	5 (1.5%)	2 (0.63%)

Caeserean Hysterectomy - 1
(Indication - Grandmulti with uncontrolled PPH)
(ANC NOT ATTENDED)

Maternal Mortality - 4 (0.06%)

ANC Attended - 1 G₂, P₁₊₀ Previous C/S with placenta previa grade III

Cause of Death - Irreversible shock due to primary PPH

ANC NOT ATTENDED -

1. Primi with Severe PET with Anaemia

Cause of Death -

2. **Massive pulmonary embolism**

3. Home delivery with post partum Eclampsia leading to renal failure

4. Home delivery with septicaemia leading to DIC

Condition of Baby During Delivery

<u>Condition of Baby</u>	<u>ANC Attended</u>	<u>ANC NOT Attended</u>	<u>Total</u>
Term Baby (wt 2.5 -3.9Kg)	3320 (86%)	1633 (68%)	4953 (79.3%)
LBW (<2.5Kg)	315 (8.2%)	470 (22%)	785 (12.5%)
Over weight baby (>4kg)	1 (0.026%)	3 (0.048%)	4 (0.06%)
Premature baby	85 (2.2%)	123 (5.1%)	208 (3.3%)
Asphyxia	87 (2.3%)	124 (5.1%)	211 (3.4%)
* S. B	28 (0.72%)	47 (1.9%)	75 (1.2%)
Congenital Abnormal baby	3 (0.078%)	5 (0.23%)	8 (0.12%)
* Neonatal Death (In PBU)	82 (1.3%)		
* Perinatal Mortality	(25%)		

Discussion

This was prospective analytical case control study done in Maternity Hospital , Thapathali . Duration of study was 6 months (From Baisakh to Ashoj). Objective of study was to find out maternal morbidity and fetal outcome in cases who delivered in Maternity Hospital , Thapathali. Both high risk and non high risk cases were included . In the study exclusion criteria was patients admitted before 28 wks pregnancy . Total cases analyzed were 6244 among them ANC attended group was 61.5% , ANC not attended group was 38.5% . By our analysis we found that higher percentage who had not attended ANC clinic belonged to rural area & higher percentage who had attended ANC clinic belonged to urban area . Among ethnic group higher percentage who had attended ANC clinic were Brahmains and Newars . High risk cases were more in ANC not attended group (47.8%) . Among high risk mostly they were Y. primi, PROM, PET, PRETERM Labour and Anaemia. Maximum age group who had attended ANC clinic was 20 - 24 yrs. Primi gravida attended antenatal care clinic more than multi . Normal deliveries were more in ANC attended group (86%) and abnormal deliveries were more in antenatal not attended group (33.5%). Total LSCS were (52.6%). Instrumental deliveries (22.6%) & Preterm deliveries (11.5%), Breech deliveries (4.3%) , Twin deliveries (3.5%) . Total complication during deliveries was (5.6%). among them PPH was 93.03%. During our study period there was one caeserean Hysterectomy (Indication Grand multi with uncontrolled PPH). Maternal Mortality 0.06% LBW babies 12.5%. Premature babies 3.3%. Still birth babies 1.2% . Congenital abnormal babies 0.12%. Neonatal death in PBU 1.3%. Perinatal Mortality 25%.

Conclusion

By our analysis , we have come to the conclusion that maternal and foetal out come was better in cases who had ANC. Number of high risk pregnancy, abnormal delivery, complication rate, Perinatal Mortality and maternal Mortality were higher among cases who didn't attend antenatal care . So to improve the maternal & foetal outcome firstly we have to create awareness among pregnant women about the necessity of Anatenatal care and secondly avaibility and accessibility of Anatenatal care should be improved through out the country.

Reference

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QUESTIONNAIRE

1. Name of patient :

2. Age :

3. Address :

4. LMP :

5. Grvt Age : 28 - 37

27 - 40

40 - <

6. Parity :

Primi :

G₂ - G₄

G₅ - >

7. High Risk :

None

Y. Primi

Ec. Primi

PET

Prev. Cs

PROM

Short Stature

Pre N/O 3 abt

N/O NND

8. ANC :

None

Yes

9. Type of Delivery :

ND

LSCS

Preterm De

ND Tear

Forcepe

ND Epi

Vaccum

10. Complication of Delivery :

VD - PPH

Haematoma

Retain Placenta

11. Baby Preterm

12. Wt of Baby :

< 2.. 49kg

2.5 - 3.9kg

<4. kg

13. PBU Admission : Yes

No

14. Duration of PBU Stay :

24hrs

24 - 48hrs

>48hrs

15. Indication for PBU Stay :

For Observatio

Asphexia

Mec. Aspiratio

IUGR Premature

16. Duration of Hospital of Stay :

1 - 2 day

3 - 4 day

5 - 6 day

7 day >

