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Practices of Antenatal care in Rural India

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Abstract

Background: Antenatal care is a key strategy to improve maternal and infant health. The present study was done with the objective of assessing standards of antenatal care in rural areas.

Material & Methods: A community based cross-sectional study was conducted in the practice study area of the Department of Community Medicine by Department of Obstetrics & Gynaecology, Varun Arjun Medical College, Shahjahanpur, U.P. from April to June 2019. Antenatal patients of more than 30 weeks of gestation were included in the study.

Results: Among 200 study subjects, majority of pregnant women were in 21-30 years age group.

In present study, out of 200 pregnant women, majority i.e. 112 (56%) women were primigravida, 72 (36%) women were pregnant for second time while 16 (8%) women were pregnant for third time.

34 (17%) women had their first antenatal visit at 6 weeks, 78 (39%) women had their first antenatal visit in second trimester while 88 (44%) women had their first antenatal visit in third trimester.

All 200 (100%) women had received immunization against tetanus, 44 (22%) had received Swine Flu vaccine while 176 (88%) women were taking both iron & Calcium supplements.

Conclusion- In present study, practice of T.T. immunization was universal. Practice of taking iron & calcium supplements was also good. Women were having at least four antenatal visits as per WHO but the percentage of women having antenatal visit at 6 weeks was very poor. Also, Swine Flu vaccine was very poor.

Keywords: Antenatal care, primigravida, antenatal visit, antenatal care, vaccination

Introduction

In developing world including India, more than 30 million women are suffering each year from serious obstetric complications.[1]

The World Health Organization (WHO) reported that in 2015, around 830 women died every day from complications in pregnancy and childbirth. Out of these, only 5 lived in high-income countries & rest lived in low-income countries.[2]

Although services are given freeof cost, there are number of factors which contribute to late initiation of antenatal care among pregnant women. These may vary between rural and urban areas.[3]

Prenatal care is a type of preventive healthcare. It is also known as **antenatal care.** Its goal is to provide regular check-ups. This allows doctors to treat and prevent potential health problems throughout the pregnancy and to promote healthy lifestyles which will benefit both mother and child.[4]

Traditional prenatal care generally consists of:[5]

- Monthly visitsfrom 1st week to 28th week
- Fortnightly visits from 28th week to 36th week of pregnancy
- Weekly visits after 36th week till delivery
- Assessment of parental needs and family dynamics

The WHO recommends that pregnant women should receive at least four antenatal visits to spot and treat problems and give immunization. Although antenatal care is important to improve the health of mother and baby, many women do not receive four visits.[6]

The care of women during pregnancy is called Antenatal care. It includes pregnant woman's visit to antenatal clinic, examination, investigations, immunization, supplements of iron, folic acid, calcium, and the required interventions. This is a comprehensive approach to medical care and psychological support to the family which begins at conception and ends with onset of labor. It envisages on-going assessment of risk, identifying and managing problems through education, counseling and medical interventions. The goal of Antenatal care is to have a healthy mother and healthy baby at the end of pregnancy.[7]

Generally an ultrasound is advised along a schedule similar to the follow up or if some abnormality is suspected at-:[8]

- 7 weeks — to confirm pregnancy, to rule out molar or ectopic, to determine due date
- 13–14 weeks — to evaluate the possibility of Down syndrome
- 18–20 weeks — to see the congenital abnormalities
- 34 weeks – to evaluate size, verify placental position

A study in Ethiopia showed that proper advice and information on timely booking from service providers and community level are very important for the effective utilization of the service.[9]

Many health problems among pregnant women are preventable, detectable or treatable. This is possible through visits with trained health workers before birth. This way, women can receive important services, like tetanus immunisations and screening and treatment for infections. It also gives information about warning signs during pregnancy.[10]

Material & Methods

A community based cross-sectional study was conducted in the field of practice area of the Department of Community Medicine by Department of Obstetrics & Gynaecology,,Varun Arjun Medical college, Shahjahanpur, U.P. from April to June 2019. Antenatal patients of more than 30 weeks of gestation were included in the study. A pre-designed questionnaire, which was pre tested was used to collect the information. The information was collected on demographics like age, education, occupation and no of children, study variables like ANC visits, immubisations, medications & investigations. Questions were framed on the knowledge regarding various aspects of Ante natal care and regarding practices related to antenatal care. Verbal consent was taken from the pregnant women after explaining the purpose of the study.

Inclusion Criteria

- Pregnant women of gestational age >30 weeks or more
- Pregnant women willing to participate in the study

Exclusion Criteria

- Pregnant women of gestational age <30 weeks
- Pregnant women not willing to participate in the study

Table : Questionnaire

Sn.	Variables
1	Name
2	Age
3	Socioeconomic status
4	Gestational age
5	Gestational age at first visit
6	Total number of visits
7	Immunization done
8	Iron & Calcium supplements taken
9	Investigations done
10	Ultrasound done

The data were retrieved and entered into Microsoft excel and analyzed using statistical software STATA version 10.1 (2011) . The descriptive statistics were used to summarize categorical variables with frequency & percentages. Resulting estimates (proportions) of study variables were expressed along with 95% Confidence intervals (95% CI).

Results

Table 2: Age distribution of study subjects n=200

Age group	No. of pregnant women	Percentage (95%CI)
<20 years	10	5% (2.4-9.0%, 95% CI)
21-30 years	138	69% (62.1-75.3%, 95% CI)
31-40 years	40	20% (14.-26.2, 95% CI)
>40 years	12	6% (3.1-10.2%, 95% CI)

In present study, out of 200 pregnant women, 10 (5%) (2.4-9.0% 95% CI) pregnant women were teenagers i.e. below 20 years of age, majority i.e. 138 (69%) (62.1-75.3%, 95% CI) pregnant women were in 21-30 years age group, 40 (20%) (14.-26.2, 95% CI) pregnant women were in 31-40 years age group while 12 (6%) (3.1-10.2%, 95% CI) pregnant women were in more than 40 years age. (Table 2)

Table 3: Gravidity of study subjects n=200

Gravidity	No. of pregnant women	Percentage (95% CI)
Primigravida	112	56% (48.8-63.0 95%CI)
Second pregnancy	72	36% (29.4-43.1% 95% CI)
Third pregnancy	16	8% (4.6-12.7% 95% CI)

In present study, out of 200 pregnant women, majority i.e. 112 (56%) (48.8-63.0 95%CI) women were primigravida, 72 (36%) (29.4-43.1% 95% CI) women were pregnant for second time while 16 (8%) (4.6-12.7% 95% CI) women were pregnant for third time.(Table 3)

Table 4: Timing of First antenatal visit of study subjects n=200

First antenatal visit	No. of pregnant women	Percentage 95% CI)
At 6 weeks	34	17% (12.1 - 22.995%CI)
In 2nd trimester	78	39% (32.2-46.195%CI)
In 3rd trimester	88	44% (37.0-53.2% 95%CI)

In present study, out of 200 pregnant women, only 34 (17%) (12.1 -22.995%CI) women had their first antenatal visit at 6 weeks, 78 (39%) (32.2-46.195%CI)

women had their first antenatal visit in second trimester while 88 (44%) (37.0-53.2% 95%CI) women had their first antenatal visit very late in third trimester.

So, majority of women had their first antenatal visit either in first or second trimester but almost two-fifth of women had delayed visit to third trimester..(Table 4)

Table 5: No of antenatal visits of study subjects n=200

No of antenatal visits	No. of pregnant women	Percentage (95%CI)
<4 visits	24	12% (7.8-17.3% 95%CI)
4 visits	68	34% (27.5-41.0% 95%CI)
>4 visits	108	54% (48.4-61.1% 95%CI)

In present study, out of 200 pregnant women, 24 (12%) women had less than four antenatal visits, 68 (34%) women had at least four antenatal visits while 108 (54%) women had more than four antenatal visits.

So, majority of women had four or more antenatal visits, (Table 5)

Table 6: Immunization & Medication of study subjects n=200

Immunization & Medication	No. of pregnant women	Percentage (95%CI)
Tetanus Toxoid	200	100%
Swine Flu vaccine	44	22% (16.5-28.4 95%CI)
Iron supplements	176	88% (82.7-92.2 95%CI)
Calcium supplements	176	88% (82.7-92.2 95%CI)

In present study, out of 200 pregnant women, 200 (100%) women had received immunization against tetanus, only 44 (22%) had received Swine Flu vaccine while 176 (88%) women were taking iron & Calcium supplements both.

So, practice of Tetanus Toxoid was universal & practice of taking iron & calcium was also good. (Table 6)

Discussion

In present study, out of 200 pregnant women, 10 (5%) (2.4-9.0% 95% CI) pregnant women were teenagers i.e. below 20 years of age, majority i.e. 138 (69%) (62.1-75.3%, 95% CI) pregnant women were in 21-30 years age group, 40 (20%) (14.-26.2, 95% CI) pregnant women were in 31-40 years age group while 12 (6%) (3.1-10.2%, 95% CI) pregnant women were in more than 40 years age. (Table 2)

Similar to our study, Kaur A et al found that 76.1% were in age group of 20-30 years. 15.3% and 8.6% were 30 year old.[11]

In present study, out of 200 pregnant women, majority i.e. 112 (56%) (48.8-63.0 95%CI) women were primigravida, 72 (36%) (29.4-43.1% 95% CI) women were pregnant for second time while 16 (8%) (4.6-12.7% 95% CI) women were pregnant for third time.(Table 3)

Similar to our study, Mengesha BG et al found that 409 [67.3%], of respondents had parity one and above. 184 [30.3%] were primigravida and 15 [2.4%] of the respondents had parity greater than five.[12]

In present study, out of 200 pregnant women, only 34 (17%) (12.1 -22.995%CI) women had their first antenatal visit at 6 weeks, 78 (39%) (32.2-46.195%CI) women had their first antenatal visit in second trimester while 88 (44%) (37.0-53.2% 95%CI) women had their first antenatal visit very late in third trimester.

So, majority of women had their first antenatal visit either in first or second trimester but almost two-fifth of women had delayed visit to third trimester..(Table 4)

Contrary to our study, Bhaisare KA et al found that 58 women were registered during first trimester. 37 women registered during second trimester. Only 5 women registered during third trimester.[13]

In present study, out of 200 pregnant women, 24 (12%) women had less than four antenatal visits, 68 (34%) women had at least four antenatal visits while 108 (54%) women had more than four antenatal visits.

So, majority of women had four or more antenatal visits, (Table 5)

Similar to our study, NFHS 4 reported that in India 58.6% of mothers had antenatal check up in the first trimester. 51.2% of mothers had at least 4 antenatal care visits. 30.3% mothers consumed iron & folic acid for 100 days or more during pregnancy. In Punjab, the incidence is 75.6%, 68.5% and 42.6% for the same.[14]

Similar to our study, Respress ET et al found that 53.4% had at least 7 ANC visits. 27.2% of the women had 4-6 ANC visits according to WHO.[15].

In present study, out of 200 pregnant women, 200 (100%) women had received immunization against tetanus, only 44 (22%) had received Swine Flu vaccine while 176 (88%) women were taking iron & Calcium supplements both.

So, practice of Tetanus Toxoid was universal & practice of taking iron & calcium was also good. (Table 6)

Similar to our study, Respress ET et al found that 91.0% had Iron supplementation, 51.7% had folic acid supplementation (and 94.1% had voluntary counseling and testing for HIV.[15]

Similar to our study, Eram U et al found that In rural area of Aligarh, 50% of the mothers knew the correct doses of TT injection.[16]

Conclusion

In present study, practice of Tetanus Toxoid immunization was universal. Practice of taking iron & calcium supplements was also good. Women were having at least four antenatal visits as per WHO but the percentage of having antenatal visit at 6 weeks was very poor. Also, Swine Flu vaccine was very poor.

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