

Awareness regarding Antenatal Investigations among Antenatal Mothers attending Selected Tertiary Hospital, Kochi, Kerala

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ABSTRACT

Background: An antenatal investigation has now literally entered in the domain of prenatal care. Early antenatal investigations help to identify many sorts of medical and infectious diseases during pregnancy and initiate treatment for safeguarding the health of mother and fetus. Many antenatal mothers undergo antenatal investigations without adequate understanding.

Objectives: To identify awareness regarding antenatal investigations among antenatal mothers and to prepare an information booklet on antenatal investigations.

Materials and methods: It is a descriptive study conducted among 180 antenatal mothers attending Obstetrics and Gynecology Outpatient Department in Amrita Institute of Medical Sciences (AIMS) at Kochi. The subjects were selected using quota sampling technique. The trimester was selected as the quota. Sixty women each were selected from first, second and third trimesters. Data were collected using semistructured knowledge questionnaire developed by the investigator.

Results: The mean score of antenatal investigations was 8.96 ± 6.33 with maximum score 19. Among 180 subjects, 61% of antenatal mothers had poor level of awareness regarding antenatal investigations, 63% were belong to first trimester and 64% were primigravida.

Interpretation and conclusion: The study concluded that the level of awareness among antenatal mothers was poor. It is very essential to organize an awareness program to increase the uptake of antenatal investigations.

Keywords: Awareness, Antenatal investigations, Antenatal mother, Information booklet.

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INTRODUCTION

Antenatal investigations are the procedures performed during pregnancy to detect health problems in the growing fetus, or diagnose any maternal conditions that may affect fetal development.¹ In a country like India, many women face lot of health problems during pregnancy, such as anemia, gestational diabetes mellitus, hyperthyroidism, hypothyroidism, urinary tract infection, hepatitis B infection, etc. In India, anemia is a major health problem during pregnancy. NFHS-3 (2013) estimated that 58% of pregnant women in India are anemic in which 32.2% of anemic cases detected in Kerala in the year of 2013.² The prevalence of GDM is high in India due to the ethnic predisposition. It is most commonly seen in women living in urban than in rural areas.³ The national aids control program (NACP) III reported that in India nearly 5% of HIV infections are acquired through parent to child transmission.⁴ Early antenatal investigations help to sort these type of medical and infectious disorders and initiate treatment to safeguard the life of the mother and baby.

Antenatal screening will provide reassurance that the chances of their baby having any problems are very low. Hence, all antenatal mothers should be giving with proper instructions and guidance before performing each test. Improper physical preparation may lead to inappropriate test results usually seen in the result of urine culture, glucose challenge test (GCT), glucose tolerance test (GTT) and thyroid stimulating hormone (TSH). Literature studies reported that majority of antenatal mothers undergo antenatal investigations without knowing its purpose and importance.⁵

The researcher observed many antenatal mothers attending Obstetrics and Gynecology Outpatient Department at AIMS, Kochi, had lot of queries regarding need of antenatal investigations, its purpose, timing, methods and preparations required. Hence, the researcher feels that it is very essential to assess the level of awareness

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regarding antenatal investigations with a view to develop an information booklet.

MATERIALS AND METHODS

The study used a quantitative approach with descriptive survey design. The sample consists of 180 antenatal mothers attending Obstetrics and Gynecology Outpatient Department at Amrita Institute of Medical Sciences, AIMS, Kochi. The data were collected during the period of November to December 2013. The participants were selected using quota sampling technique with trimester as the quota. Sixty subjects were selected from each trimester. Ethical clearance was obtained from Thesis Review Board of Amrita Institute of Medical Sciences. The data were collected using semistructured knowledge questionnaire developed by the investigator. The questionnaire consisted of 26 items. Each correct response carries one mark. Content validity of the tool was established from six experts. The content validity index was 0.96. Reliability of the tool was 0.82 calculated using split half method. A detailed explanation is given to the subject before recruitment. After obtaining an informed consent, the subject given with semistructured knowledge questionnaire.

RESULTS

Most of the antenatal mothers, 91 (51%), belonged to the age group of 26 to 30 years and, 103 (57%), were graduates or postgraduates. Eighty participants (44%) were received health-related information from newspaper/magazines and 76 (42%) from friends/relatives.

Most of the participants, 96 (53%), were primigravida and, 84 (47%), were multigravida. Among the participants, 14 (36%) had hypo/hyperthyroidism, 11 (28%) had gestational diabetes mellitus and 9 (23%) were anemic.

Majority of the subjects 172 (96%) had awareness about own blood group.

Awareness regarding Antenatal Investigations

The study revealed that the mean score of antenatal investigations was 8.96 ± 6.33 (maximum score 26). Based on the score obtained, the awareness level of participants is categorized into good (19-26), average (10-18) and poor (1-9).

Distribution of participants based on level of awareness is given in Graph 1.

Graph 1 shows that awareness regarding antenatal investigation was poor among 109 (61%) antenatal mothers and average among 69 (38%) antenatal mothers. Only two (1%) antenatal mothers had good level of awareness.

The awareness level of primigravida and multigravida mothers is presented in Graph 2.

Graph 2 shows that the level of awareness regarding antenatal investigations was poor in both primigravida (64%) and multigravida mothers (55%).

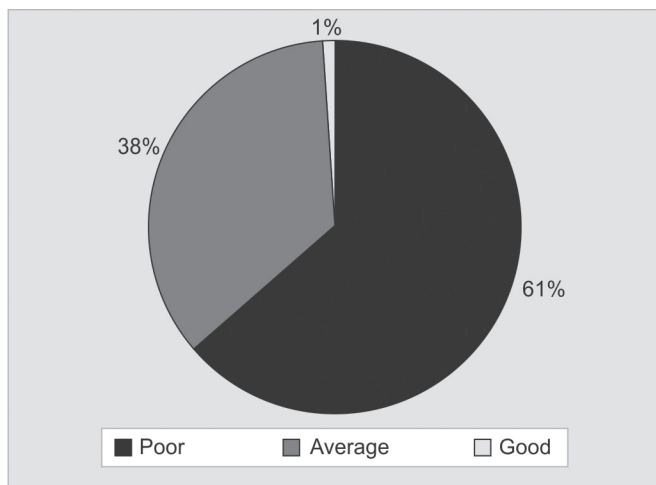
Awareness in Different Areas of Antenatal Investigations

Awareness was assessed on blood test, urine test and ultrasound scan during pregnancy.

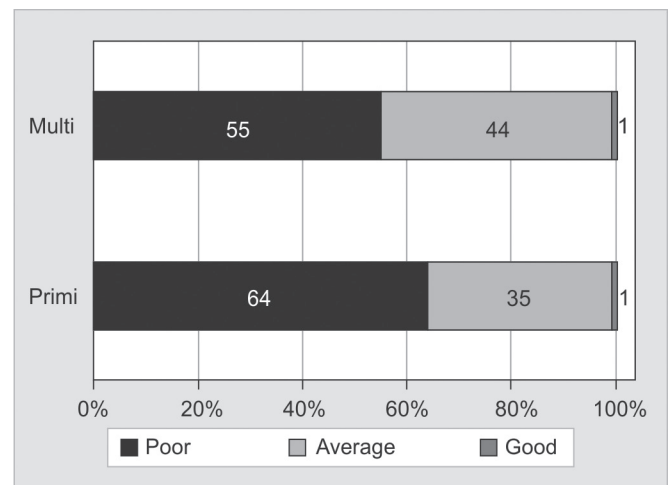
Table 1 depicts that antenatal mothers scored better in the areas of urine test (65%). The score was less than 50% in all other areas.

Comparison of awareness score in specific areas of antenatal investigations among antenatal mothers in first, second and third trimester is presented in Table 2.

Table 2 shows that one way ANOVA test was used to compare the specific areas of awareness regarding antenatal investigations among antenatal mothers in



Graph 1: Distribution of participants based on the scores of awareness regarding antenatal investigations (n = 180)



Graph 2: Awareness regarding antenatal investigations among primigravida and multigravida (n = 180)

Table 1: Mean score of awareness in different areas of antenatal investigations (n = 18)

Specific areas of awareness level	Maximum score	Mean score and standard deviation	Mean score (%)
Blood test	5	2.41 ± 1.204	48
GCT and GTT	4	0.87 ± 1.028	22
Urine test	2	1.30 ± 0.700	65
Ultrasound scan	10	3.57 ± 2.370	36
Special investigations	5	0.81 ± 1.043	16
Total	26	8.96 ± 6.33	34.46

Table 2: Comparison of specific areas of awareness score in specific areas of antenatal investigations among antenatal mothers in first, second and third trimesters calculated using one way ANOVA

Specific areas of awareness	Mean score, standard deviation and mean score percentage				
	First trimester	Second trimester	Third trimester	df	f-value
Blood test	2.38 ± 1.24 (48%)	2.45 ± 1.18 (49%)	2.41 ± 1.19 (48%)	2	0.45
GCT and GTT	0.66 ± 0.75 (17%)	0.91 ± 0.90 (23%)	1.05 ± 1.34 (26%)	2	2.17
Urine test	1.18 ± 0.74 (59%)	1.25 ± 0.70 (63%)	1.46 ± 0.62 (73%)	2	2.73
Ultrasound scan	3.16 ± 2.37 (32%)	3.73 ± 2.34 (37%)	3.83 ± 2.37 (38%)	2	1.38
Special test	0.88 ± 1.13 (18%)	0.70 ± 1.01 (14%)	0.86 ± 0.98 (17.2%)	2	0.563
Total	8.26 ± 6.23	9.04 ± 6.13	9.61 ± 6.5	10	1.007

first, second and third trimesters. The result of the study revealed that the calculated F-value (1.007) is less than the table value (3.04) at 0.05 level of significance. There is no statistically significant difference between awareness on antenatal investigations among antenatal mothers in first, second and third trimesters. However, there is a statistically significant difference in awareness regarding GCT and GTT and urine test among first, second and third trimesters.

DISCUSSION

Antenatal investigations are important tools for protecting the health of a pregnant woman and her developing child. Various tests are administered over the course of pregnancy. The benefits of antenatal investigations should be explained to each antenatal mother before taking them for tests and scans. A study from Al-Khobar country documented that 12.7% of antenatal mothers were not aware about blood examination and 11.7% were believed that blood group and diseases, such as hepatitis B (4.3%) and syphilis (1%), are the most common reason for blood examination.⁶ The present study demonstrates that the awareness regarding antenatal investigations was poor among antenatal mothers. Only less than 50% of the subjects were aware about the blood test, glucose tolerance test, glucose challenge test, ultrasound scan and specific investigations like thyroid function test, rubella screening, Coombs test, group B Streptococcus screening. There is a significant difference on awareness regarding GCT, GTT and urine test found between first, second and third trimester. Therefore, it is necessary to

prepare antenatal mothers for antenatal investigations both physiologically and psychologically before each test.

Another study conducted by Acevedo MR⁷ to assess the effectiveness of booklet and counseling *vs* traditional counseling on improving the knowledge, attitude and practices among 203 pregnant women. Investigator observed that booklet and counseling was better than traditional counseling on improving the knowledge and attitude of the subjects.

Based on the present study result, the investigator prepared an information booklet on antenatal investigations which was focused on those areas where the result of the study showed a deficiency in the awareness level, which will help to improve the knowledge level of the mother and increase the utilization of facilities by the mothers.

CONCLUSION

The findings of the study showed that antenatal mothers have inadequate level of awareness regarding antenatal investigations, especially mothers in the first trimester. Thus, awareness program should be conducted among antenatal mothers in all trimesters on topic of antenatal investigations to increase the uptake of routine tests during pregnancy.

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