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INCIDENCE AND PREVALENCE OF PREGNANCY INDUCED HYPERTENSION AND ANEMIA IN KHAMMAM AREA, TELANGANA STATE

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ABSTRACT

Objective: The aim of this study was to estimate the incidence and prevalence of Pregnancy Induced Hypertension (PIH) and Anemia in pregnant women prior to delivery. **Methods:** An observational retrospective study was conducted between December 2016 and June 2017 in a District Headquarters Hospital and two other tertiary antenatal care centers on pregnant women who delivered between 37 and 42 weeks of gestational age. The study participants data was collected prior delivery who were recorded with blood pressure that was found to be elevated i.e, 140/90 mmHg and blood heamoglobin level with <10g/dl. **Results**: A total of 538 Pregnant women were included whose information was sampled who were categorized into rural and urban communities based on age groups. A prevalence of 43.4% (n = 234) was identified with PIH and 56.5% (n = 304) with Anemia. Age specific prevalence of the women with PIH, 52.2% (n = 122) from Rural area, with 17 – 20 were about 35.2% (n = 43), 21 – 23 were about 27.8% (n = 34), 24 – 27 were about 21.3% (n = 26), 28 – 30 were about 12.2% (n = 15) and > 30 were found to be 3.2% (n = 4) and 47.8% (n = 112) Urban area, with 17 – 20 were about 22.3% (n = 25), 21 – 23 were about 33.9% (n = 38), 24 – 27 were about 30.3% (n = 34), 28 – 30 were about 7.1% (n = 8) and > 30 were found to be 6.25% (n = 7). A prevalence of 56.5% (n = 304) was identified with Anemia in Pregnancy, 57.5% (n = 175) were from Rural area, with 17 – 20 were about 21.1% (n = 37), 21 – 23 were about 27.4% (n = 48), 24 – 27 were about 37.1% (n = 65), 28 – 30 were about 9.1% (n = 16) and > 30 were found to be 5.1% (n = 9) and 42.4% (n = 129) were from Urban area, 17 – 20 were about 11.6% (n = 15), 21 – 23 were about 28.6% (n = 37), 24 – 27 were about 36.4% (n = 47), 28 – 30 were about 13.9% (n

= 18) and > 30 were found to be 9.3% (n = 12). **Conclusion:** Ignorance regarding antenatal check up, lack of transport and lack of early communication with tertiary hospital play an important role for high incidence / prevalence of complications in pregnancy in Khammam region, Telangana State.

KEYWORDS: Prevalence, Pregnancy Induced Hypertension, Anemia in pregnancy, Sociodemographic Characteristics.

INTRODUCTION

Pregnancy hypertension also known as Pregnancy Induced or Pregnancy associated Hypertension has its onset from 20 weeks of gestation associated with high blood pressure during pregnancy.[1] It can develop during pregnancy or delivery and its clinical presentation is characterized by hypertension, proteinuria and edema[2] PIH is defined as BP ≥ 140/90 mmHg, taken after a period of rest on two occasions or ≥ 160/100mmHg on one occasion in a previously normotensive women. It is also estimated that PIH affects about 5-8% of all pregnant women worldwide.[3]

Anemia is defined as decrease in the ability of blood to carry oxygen due to decrease in total number of erythrocytes (each having a normal quantity of heamoglobin) a diminished concentration heamoglobin per erythrocyte or both.[4] Anemia during pregnancy is defined by Centers of Disease Control and Prevention (CDC) and World health organization (WHO) as heamoglobin concentration < 11g/dl. It is considered as severe when heamoglobin <7.0g/dl, moderate 7-9.9g/dl and mild 10.0-10.9g/dl.[5] Anemia in pregnancy is one of the most common preventable causes of maternal morbidity and poor perinatal outcome.[6] Current estimates from world health organization put prevalence of anemia at 41.8% among pregnant women with highest prevalence rate (61.3%) found among pregnant women in Africa and 52.5% among south east-asia. The prevalence of anemia in developing and developed countries is estimated to be 43% and 9% respectively.[7]

This study was done to estimate and compare prevalence of Pregnancy Induced Hypertension and Anemia in pregnant women based on age groups categorized under Urban and Rural communities. It is envisaged that the results of this study will provide essential information regarding the need to treat and prevent the complications during pregnancy where there is also a challenge of changing dietary and lifestyle practices which are the risk factors.

METHODS[8,9,10,11]

Study Design, Area, Period

An observational retrospective study was conducted at different tertiary care hospitals from December 2016 to June 2017 at Khammam Area, Telangana State.

Study Population

The study participants were pregnant women attending antenatal care centers in government hospital and two other public health centers of Khammam area. The pregnant women who has fulfilled the inclusion criteria were enrolled in the study. Each participant were taken in to consideration at the time of delivery during data collection period.

Sample Size

A total number of 538 pregnant women were attended for delivery of which the participants were considered as sample who were with the blood pressure found to be elevated i.e, 140/90 mmHg and blood heamoglobin level <10g/dl.

Data Collection and Sampling Procedure

The information was obtained from the medical records of the patient from the hospitals which were recorded with blood pressure that was found to be elevated i.e, 140/90 mmHg and blood heamoglobin level was used to assess anemia status of pregnant women with <10g/dl of blood level were considered as anemia of which age and geographical area were considered as Sociodemographic characteristics.

RESULTS AND DISCUSSION

A total of 538 Pregnant women were included whose information was sampled, of which 43.4% (n = 234) were identified with Pregnancy Induced Hypertension and 56.5% (n = 304) were identified with Anemia (Figure 1).

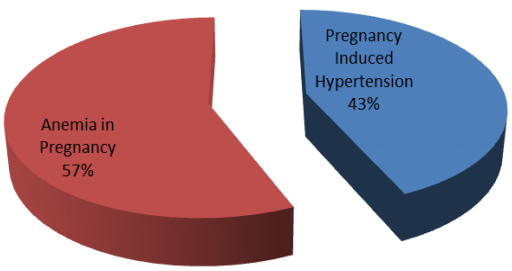

Figure 1: Prevalence of Pregnancy Induced Hypertension and Anemia in Pregnancy attending antenatal care centers at Khammam area, Telangana State, December2016 – July 2017.

Table 1: Socio-demographic characteristics of pregnant women with PIH and Anemia at Khammam region, Telangana state, December 2016 – June 2017.

Variables	Frequency n	Percentage %
PIH	234	43.4%
Urban area	112	47.8%
17 – 20	25	22.3%
21 – 23	38	33.9%
24 – 27	34	30.3%
28 – 30	8	7.1%
>30	7	6.25%
Rural area	122	52.2%
17 – 20	43	35.2%
21 – 23	34	27.8%
24 – 27	26	21.3%
28 – 30	15	12.2%
>30	4	3.2%
Anemia	304	56.5%
Urban area	129	42.4%
17 – 20	15	11.6%
21 – 23	37	28.6%
24 – 27	47	36.4%
28 – 30	18	13.9%
>30	12	9.3%
Rural area	175	57.5%
17 – 20	37	21.1%
21 – 23	48	27.4%
24 – 27	65	37.1%
28 – 30	16	9.1%
>30	9	5.1%
Total	**538**	

Prevalence of Pregnancy Induced Hypertension

Of the women 43.4% (n = 234) with Pregnancy Induced Hypertension in this study, majority of the study participants 52.2% (n = 122) were from Rural area and the remaining 47.8% (n = 112) were from Urban area (Figure 2).

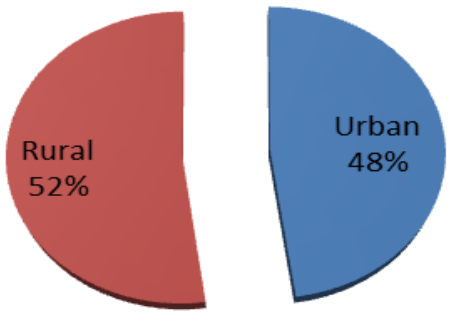

Figure 2: The prevalence of PIH categorized into geographical areas wise.

The pregnant women attending the antenatal care centers included in the study from various regions were categorized based on age groups. Of the pregnant women from Rural areas, the age group with 17 – 20 were found to be high among all age groups about 35.2% (n = 43) and the age groups 21 – 23 were about 27.8% (n = 34), 24 – 27 were about 21.3% (n = 26), 28 – 30 were about 12.2% (n = 15) and > 30 were found to be 3.2% (n = 4). Of the pregnant women from Urban areas, the age group with 17 – 20 were about 22.3% (n = 25), 21 – 23 were found to be high among all age groups about 33.9% (n = 38), and the age groups 24 – 27 were about 30.3% (n = 34), 28 – 30 were about 7.1% (n = 8) and > 30 were found to be 6.25% (n = 7) (Figure 3).

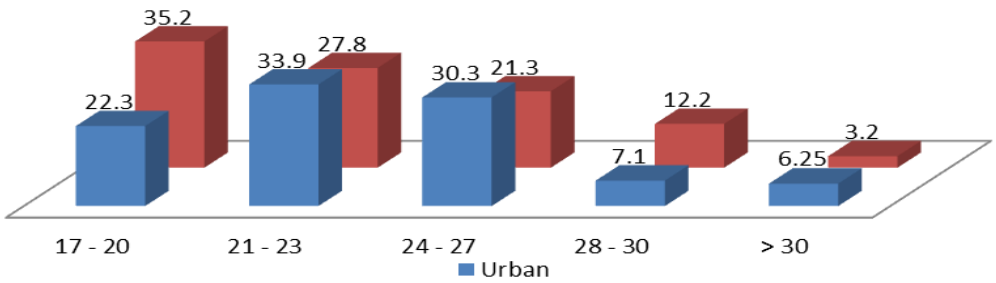

Figure 3: Prevalence of PIH in pregnant women categorized into age groups under geographical areas.

Prevalence of anemia in Pregnancy

Of the women 56.5% (n = 304) with Anemia in Pregnancy in this study, majority of the study participants 57.5% (n = 175) were from Rural area and the remaining 42.4% (n = 129) were from Urban area (Figure 4).

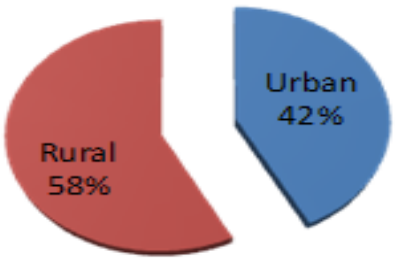

Figure 4: The prevalence of Anemia in pregnant women categorized into geographical areas wise.

The pregnant women attending the antenatal care centers included in the study from various regions were categorized based on age groups. Of the pregnant women from Rural areas, the age group with 17 – 20 were about 21.1% (n = 37), 21 – 23 were about 27.4% (n = 48), 24 –

27 were found to be high among all age groups about 37.1% (n = 65), and the other age groups 28–30 were about 9.1% (n = 16) and > 30 were found to be 5.1% (n = 9). Of the pregnant women from Urban areas, the age group with 17 – 20 were about 11.6% (n = 15), 21 – 23 were about 28.6% (n = 37), 24 – 27 were found to be high among all age groups about 36.4% (n = 47), and the other age groups 28 – 30 were about 13.9% (n = 18) and > 30 were found to be 9.3% (n = 12) (Figure 5).

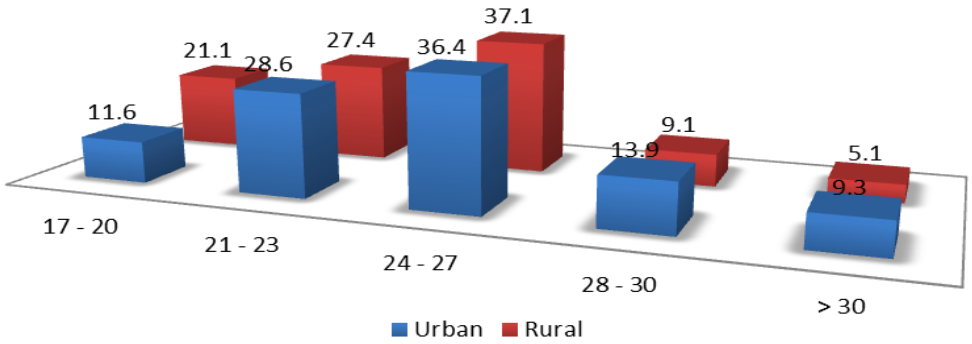

Figure 5: Prevalence of Anemia in pregnant women categorized into age groups under geographical areas.

CONCLUSION

Ignorance regarding antenatal check up, lack of transport and lack of early communication with tertiary hospital play an important role for high incidence / prevalence of complications in pregnancy in Khammam region, Telangana State. Understanding incidence/prevalence of complications in pregnancy in this particular population will help in directing the appropriate resources for care of mother and children affected by these disorders.

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