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UNIVERSALITY OF ANEMIA IN PREGNANCY AND ROLE OF CLINICAL PHARMACIST

Fathima Pothuraju[1], S.Bhuvaneswari*[1], G.Durga Bhavani[1], P.Naga Rot Kumar[2], Dr.P.Raghava Rao[3] and N.V.Rama Rao[4]

[1]Internee at Chalapathi Institute of Pharmaceutical Sciences Lam, Guntur.

[2]Student at Vikas Institute of Pharmaceutical Sciences, Rajahmundry.

[3]Associate Professor Department of Obstetrics and Gynaecology, At Government General Hospital, Guntur.

[4]Assistant Professor Department of Pharmacy Practice, Chalapathi Institute of Pharmaceutical Sciences Guntur.

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***Correspondence for Author**
Dr. S.Bhuvaneswari
Internee at Chalapathi Institute of Pharmaceutical Sciences Lam, Guntur.

ABSTRACT

BACKGROUND: To determine the prevalence of anemia in pregnancy in tertiary care hospital, provide brief overview about the causes of anemia in pregnancy,To counsel women of various pregnancy groups regarding their hemoglobin levels , nutritional status, and advice them on dietary sources. **METHOD:** A prospective observational study has been carried out in Guntur general hospital with history was collected with details of age, haemoglobin levels, blood pressure, abortions, childspacing,medication adherence, diagnosis,treatment and other relevant informations. **RESULTS:** In the total pregnant women of 5052, 29% patients are identified as mild anemic, 64% moderate, 3% severe anemic. In the first trimester 2.5% pregnant women are mild anemic, in second trimester 3.3% are mild, 13.3% are moderately anemic, 0.7% are severe anemic. In third trimester 23.8% are mild anemic, 52.2% are moderately anemic, 1% are severe anemic.23% are within the age group of 16-20years; 60.5% are within the age group of 21-25;16% are within the age group of 26-30years; 0.5% are within the age group of 31-35 years.20% of the pregnant women are non adherent. **CONCLUSION:** In 5052 pregnant women who visited government hospital, 96% are anemic. Most of the women, who visited are below poverty line with less income and low nutritional status. Due to general taboos and other reasons medication supplied in the hospital are discontinued in their third

trimester. Each and every patient is counselled and the study results are fruitful as the women showed good compliance to medication, their haemoglobin and nutritional status was better than before.

KEY WORDS: Universality, Anemia, Trimester.

AIMS AND OBJECTIVES

A clinical study to evaluate the universality of anaemia in pregnancy and role of clinical pharmacist for better therapeutic outcome in all pregnant women involved in the study period from March to August 2014.

- The objectives are to determine the prevalence of anemia in pregnancy at tertiary care hospital.
- To provide brief overview about the causes of anemia in pregnancy.
- To counsel women of various pregnancy groups regarding their hemoglobin levels, nutritional status, and advice them on dietary sources.

MATERIALS AND METHODS

STUDY DESIGN: A Non-experimental prospective observational study.

Design and sample size: This is a Non-experimental prospective observational study.

Focusing on anemia levels among women of reproductive age (16-35years). The population size from which the sample was drawn was estimated to be13890, 43.5%% was used for prevalence of anemia, The sample size of 5052 was calculated.

STUDY PERIOD: March-August 2014.

INCLUSION CRITERIA

- All women from age 16-35years old
- Women with HB levels below 11g/dl
- Women suffering with hepatitis, HIV or any other associate diseases.

EXCLUSION CRITERIA

- Critically ill patients who cannot participate in the study,(ICU Patients, sepsis and psychiatry patients).

STUDY METHOD

A prospective observational study has been carried out on universality of anemia in pregnancy and role of clinical pharmacist. : The study will be conducted in Government General Hospital, Guntur; a 1200 bedded tertiary care teaching hospital. This study was done in Guntur general hospital, Guntur with 6052 patients from inpatient and outpatient gynecology department for the treatment from 1.4.2014 to 30.9.2014 had been taken as subjects for this study. The patient case history was collected which includes the details of age, hemoglobin levels, blood pressure, abortions, child spacing, educational status, medication adherence, socioeconomic status ,diagnosis, treatment and other relevant laboratory investigations if any. The management of past illness, her improvement, and patient medication history were also recorded. The patients were interviewed for ADRs. Patients were observed for treatment compliance and counseled accordingly. Later consultation was made with physician and the data were documented. Finally, the documented data were analyzed using Microsoft excel version.

SAMPLE SELECTION: subjects of age group between 16-35years old are taken .pregnant Women with HB levels below 11g/dl are considered in the study. Women suffering with hepatitis, HIV or any other associate diseases are also included in the study. Critically ill patients,(with sepsis) ,patients in ICU and Psychiatry patients were excluded from the study.

DATA COLLECTION

The study data collected contains the following criteria's like age, hemoglobin levels, blood pressure, abortions, child spacing, educational status, medication adherence, socioeconomic status ,diagnosis, treatment and other relevant laboratory investigations if any.

The study consisted of a socioeconomic and a food intake component, each consisting of various sections. on socio-demographic factors, iron and anemia-related knowledge and attitudes of the pregnant women; consumption of iron rich foods, collected using a structured questionnaire**.**

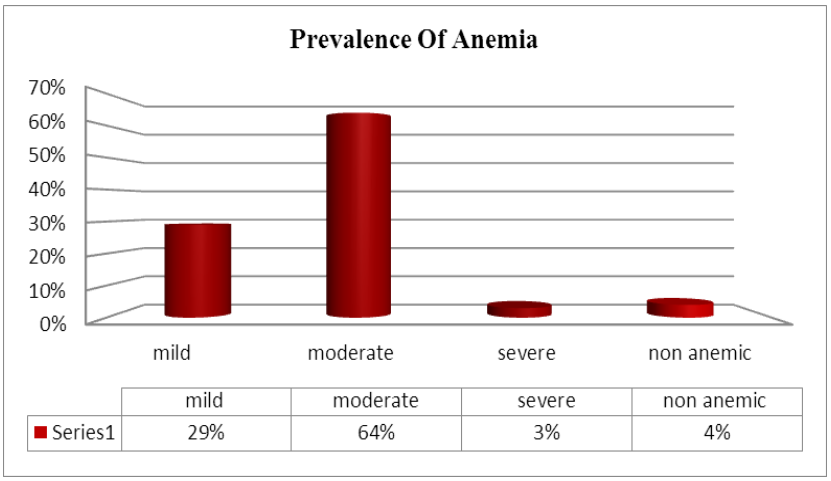
ETHICS APPROVAL

Every patient was informed about the objectives of the survey and their consent was obtained. Individual anemia status results were shown and explained to each participant. The study received ethical approval from ethics committee Guntur medical college and Guntur general hospital, Guntur.

OBSERVATION AND RESULTS

Table-I: Prevalence of Anemia

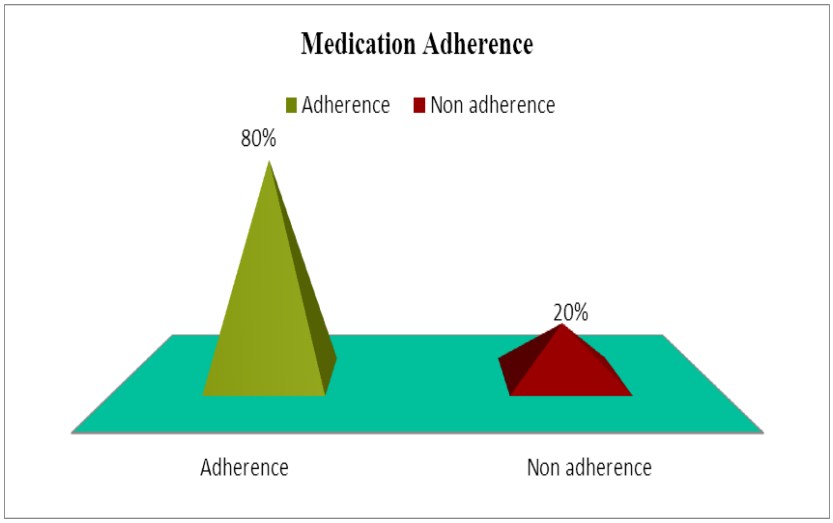
S.NO	CATEGORY	NUMBER	PERCENTAGE
1.	Mild	1500	29%
2.	Moderate	3322	64%
3.	Severe	172	3%
4.	Non-Anemic	210	4%



Graph-I: Prevalence of Anemia

Table-II: Medication Adherence

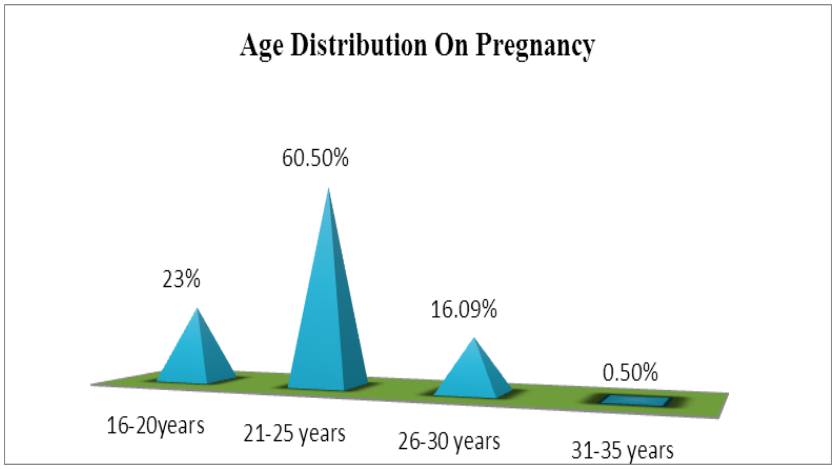
SNO	CATEGORY	NUMBER	PERCENTAGE (%)
1.	Adherence	4042	80
2.	Non-adherence	1010	20



Graph-2: Medication Adherence

Table –III: Age Distribution on Pregnancy

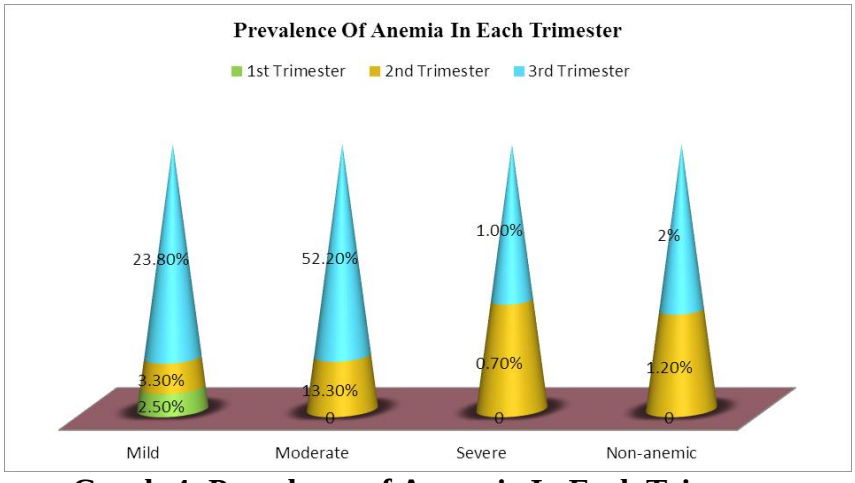
SNO	AGE GROUP(years)	NO OF PATIENTS	PERCENTAGE (%)
1.	16-20	2062	23
2.	21-25	2554	60.5
3.	26-30	409	16
4.	31-35	26	0.5



Graph-3: Age Distribution on Pregnancy

Table-IV: Prevalence of Anaemia In Each Trimester

SNO	TRIMESTER	MILD	MODERATE	SEVERE	NON ANEMIC
1.	**FIRST**	131(2.5%)	0	0	0
2.	**SECOND**	170(3.3%)	419(13.3%)	39(0.7%)	65(1.2%)
3.	**THIRD**	1207(23.8%)	2637(52.2%)	52(1%)	104(2%)



Graph-4: Prevalence of Anaemia In Each Trimester

DISCUSSION

(TABLE-I) As per the WHO classification of anemia into mild, moderate, and severe the patients visiting government general hospital are categorized based on their hemoglobin

levels done in hospital setup or in any other private laboratories based on patient interest and their economic status. In the total pregnant women of 5052, in this 1500(29%) patients are identified as mild anemic, 3322(64%) are moderate anemic, 172(3%) are severe anemic and 210(4%)patients are found to be non anemic in the study.

(Table-II) Most of the pregnant women are unaware of the importance of medications in the period of pregnancy. Most of the women skip their medications with one or the other reason, mostly they skip saying that they are having nausea or vomiting when they are taking the medications. Some of the women skip the medication by forgetting to take daily. Few women stopped the medication saying that they are in third trimester so they thought of discontinuing the medication, and the medications taken so far are enough to meet the requirement. This shows the ignorance of women regarding medication adherence and which resulted in anemic status.

(Table-III) Pregnant women of various age groups visited government general hospital are included in the study during period of April – September 2014.In total of 5052 pregnant women 2062 (23%) are within the age group of 16-20years;2554(60.5%)are within the age group of 21-25;409(16%) are within the age group of 26-30years;26(0.5%) are within the age group of 31-35 years. the study shows that many of the women conceived during the age of 21-25 years and very few women got conceived after 30years of age.

(Table-IV) As a part of study as per the WHO guidelines anemia is categorized in each trimester for all the 5052 pregnant women. In the first trimester 2.5% pregnant women are mild anemic, in second trimester 3.3% are mild anemic, 13.3% are moderately anemic, 0.7% are severe anemic and 1.2% are non anemic. In third trimester 23.8% are mild anemic, 52.2% are moderately anemic, 1% are severe anemic and 2% are non anemic. When comparison is made for all the three trimesters as per the classification women in third trimester are much effected by anemia in that moderately anemic is highest than first and second trimesters. This data shows the poor awareness, improper nutrition and their understanding of anemic condition in the pregnant women. Many of the women are unaware of anemia and good nutritional diet which improves their hemoglobin levels and keeps then sound in their health and avoids complications due to anemia.

CONCLUSION

Anemia is one of the most leading cause of complications in pregnancy. In 5052 pregnant women who visited government hospital, 96% are anemic. Most of the women, who visited,

are the women below poverty line with less income and low nutritional status. When left unnoticed due to the various reasons women ignore the symptoms of anemia. Women who are illiterates and are from low socio economic status with less child spacing, improper nutrition and poor medication adherence are more prone to anemia. Due to general taboos and other reasons medication supplied in the hospital are discontinued in their third trimester and this left women anemic. Many women hail from rural areas and due to the distance and travelling inconveniences most of the women don't report on the due date of their follow up. Each and every patient is counseled on various grounds and the study results are fruitful as the women showed good compliance to medication, their hemoglobin status got improved and the nutritional status was better than before. Pregnant women in first and second trimester are counseled better on their nutritional requirements and their present hemoglobin status and were told about the role of medication adherence and nutrition for better health and they are advised to be on regular checkups.

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