



STUDY OF BLOOD PROFILE AND HAEMOGLOBINOPATHIES IN ANTENATAL

Gynecology

Dr. Rupal Patel 3rd year resident, Department of OBGY, Smt N.H.L Medical College, Ahmedabad

Dr. Rajshree Modi 1st year resident, Department of OBGY, Smt N.H.L Medical College, Ahmedabad

Dr. Satishchandra K. Kadikar Professor and HOU of OBGY, Department of OBGY, Smt N.H.L Medical College, Ahmedabad

ABSTRACT

Introduction :

- The study reported here is designed to evaluate the overall values of major hematological and blood parameters carried out routinely during antenatal visits.

Aims & Objectives :

- To carry out routine antenatal blood profile of all the patients. The following investigations of the patients are taken :

I. Hemoglobinopathies and Hemoglobin variants

II. HIV / HBsAg / HEV

III. Hemoglobin

IV. Blood group & Rh Status

Materials & Methods :

- A hospital based study conducted on antenatal patients attending the OPD and fulfilling the inclusion criteria commenced on June 2015 and continued for 1 year till May 2016.

- All the patients were subjected to following blood investigations based on OPD methods of detection in the pathology department.

I. Hemoglobin

II. Blood Group

III. Rh status

IV. HIV/HBsAg/HEV

V. Hemoglobinopathies and hemoglobin variants

- Patients were asked to follow up with reports and simultaneously husband of positive cases tested.

Conclusion :

- Routine blood profile of antenatal patients is important for health of mother & baby as appropriate treatment of conditions can be initiated at an early stage.

We can identify many high risk pregnancies just by routine blood profile. If HIV & HBsAg detected earlier universal precautions can be carried out which are beneficial to both baby & health providers. Prevalence of severe anemia, HIV, HBsAg, HEV are seen more commonly with lower socioeconomic class & therefore more vigilant testing in periphery should be promoted and adequate services should be provided. A healthy mother will give birth to a healthy offspring & with routine & compulsory blood testing, the health of the mother can be measured to a great extent.

KEYWORDS

INTRODUCTION

- Antenatal care is the greatest insurance policy a woman can invest during her pregnancy. 1st visit is a very important component of antenatal care as service providers use the occasion to collect basic medical information that will form the basis to care for the patient throughout pregnancy. Blood profile considered one of the factors affecting pregnancy and its outcome.
- The aim of the study is to evaluate the routine blood profile of all the patients attending the OPD and the hematological variation that occur.
- The study reported here is designed to evaluate the overall values of major hematological and blood parameters carried out routinely during antenatal visits.

AIMS AND OBJECTIVES

- To carry out routine antenatal blood profile of all the patients. The following investigations of the patients are taken :
- Hemoglobinopathies and Hemoglobin variants
- HIV / HBsAg / HEV
- Hemoglobin
- Blood group & Rh Status
- All investigations of husband of positive tested mothers and whenever test of husband required.
- To evaluate hematological variations take place during normal pregnancy and detection of high risk factors during pregnancy.
- To assess the level of attitude of parents regards the utilization of health care services and counseling the positive cases.

MATERIAL AND METHODOLOGY

A hospital based study conducted on antenatal patients attending the

OPD and fulfilling the inclusion criteria commenced on JUNE 2015 and continued for 1 year till MAY 2016.

Inclusion criteria

- All antenatal patients attending the OPD under Gynaec unit (A) with their consent to carry out the routine blood investigations.
- New cases in each OPD taken.
- Follow up reports of parents were taken.

Exclusion criteria

- Patients who did not follow up with their reports.
- As this study includes only blood profile, urine examination was not studied.

Methodology

- All patients were subjected to follow blood investigations based on OPD methods of detection in pathology department.
- Hemoglobin, Blood group, Rh status, HIV, HBsAg, HAHV, VDRL.
- Then patients were asked to follow up with the reports.
- Husbands of those patients who were positive of HIV, HBsAg, Rh negative were also tested for the same during next visit.

OBSERVATION AND DISCUSSION**OBSERVATION**

During study following were observed

Total number of New antenatal patients who attending gynaec unit A OPD were 3119 from this 2839 (91.02%) followed up with reports during JUNE 2015 to MAY 2016.

Table no. 1 : Cases with Anemia

Total number of anemic patients	Patients with mild anemia	Patients with moderate anemia	Patients with severe anemia	Maternal mortality due to severe anemia
1150(40.5%)	1010(35.5%)	87(3.06%)	53(1.86%)	1*

*Patient was fullterm and had very severe anemia at the time of presentation.

Mortality occurred soon after admission of the patient

Table no. 2 : Blood group statistics

Blood group	Number(%)	Husband blood group among Rhnegative mother
O positive	1127(39.7)	
A positive	741(26.1)	
B positive	643(22.6)	
AB positive	214(7.5)	
O negative	41(1.5)	husband with positive blood group - 91(79.8%)
A negative	41(1.5)	
B negative	22(0.8)	
AB negative	10(0.3)	

Table no. 3 : Cases with HIV

Total no. of HIV patients	8(0.28%)
Patients with HIV positive husbands	4(50%)
Perinatal mortality	1*
Maternal mortality	0

*The cause was preterm IUD. IUD was present at the time of 1st visit.

Table no. 4 : Cases of HBsAg / HEV

Total number of patients	16
HBsAg positive patients	12(75%)
HEV positive patients	4(25%)
Having Jaundice at present	9(56.25%)
Past history of Jaundice	7(43.75%)
Husband HBsAg positive	1(6.25%) of husbands
Perinatal mortality	2(12.5%)
Maternal mortality	0

Table no. 5 : HAHV

Number of patients with HAHV	27(0.95%)
Patients with Beta Thalassemia	Minor 17(62.96%)
	Major -
Patients with Sickle cell	Trait 7(25.93%)
	Disease -
Co existence of sickle cell trait with Alpha Thalassemia	1(3.7%)
Hemoglobin variants	2(7.41%)(HbD Punjab Trait)

Table no. 6 : Association of cases with socioeconomic class

Cases	Lower	Middle
Severe anemia (53)	36(67.9%)	17(32.07%)
HIV (8)	6(75%)	2(25%)
HBsAg (12)	8(66.66%)	4(33.4%)
HEV (4)	4	0

Table no. 7 : Comparison with other studies

Parameters	This study	Amit Agrwal	Debalin a Sahoo	Rajam ouli et al	Purush otam A Giri	J Patel et al	Roshan Colah
Blood group most common	positive (39.7%)	positive (37%)					
Rh Negative	4.01%	5.39%					
Severe Anemia (<7gm/dl)	4.61%		3.54%	5.2%			
HIV	0.28%				0.22%		
Sickle cell trait	0.3%					2.1%	
thalassemia	0.59%						2.2%

DISCUSSION

Total number of New antenatal patients who attending gynaec unit A OPD were 3119 from this 2839(91.02%) followed up with reports during JUNE 2015 to MAY 2016. Max no. of antenatal woman attending the OPD were of the age group 21-30 yr (90-76%).40.5% of the patients were anemic (Hb<10mgdl).Mild anemia (87-83%). Moderate anemia (7.56%).Severe anemia (4.61%).One mortality has been noted as she was died soon after admission due to severe anemia. Due to majority patients belonging to the lower SE class mostcommon cause of anemia attributed to nutritional deficiency. This is comparable to study by Debalinct et al in Vadodara , Gujarat.The most common type of Blood group O positive (39.7%).The least common AB negative (0.3%). This compared with the blood group in a study by Amit Agrawal et al where the most common blood bgroup was also O positive. There were 4% Rh negative blood group women. Similar study carried out by Amit Agrawal et al which had 5.39% Rh negative.79.82% of husbands of Rh negative mother had Rh positive blood group.20.18% had Rh negative blood group.Patients who tested positive for HIV constituted 0.28% compared to study done by Purushotam A. et al at 58 which was 0.22%.Husband of HIV positive patients(eight) were tested four had HIV positive(50%).One(12.5%) perinatal mortality (IUD) among the HIV positive patients.Total 12 HBsAg positive.Clinically icteric and HBsAg negative – subjected to HEV testing – 4 positive.One of the husband of HBsAg positive patients is HBsAg reactive.Two(12.5%) perinatal mortality in HBsAg positive patients. Among the sickle cell,all patients had Sickle Cell trait,0.3%.There were alpha and beta thalassemia minor cases and No major cases were reported.

CONCLUSION

- Routine blood profile of antenatal patients is important for health of mother and baby as appropriate treatment of condition can be initiated at an early stage. Simultaneously husband als tested in positive cases.
- We can identify many high risk pregnancies just by routine blood profiles.
- If HIV and HBsAg are detected earlier universal precautions can be carried out which are beneficial to both baby and health providers.
- Prevelence of severe anemia, HIV, HBsAg, HEV are seen more commonly with lower SE class and therefore more vigilant testing in periphery should be promoted and adequate services should be provided.

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