



BLOOD TRANSFUSION IN OBSTETRIC PRACTICE AND OUT COME

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ABSTRACT

AIM OF THE STUDY : To evaluate the practice of blood transfusion in obstetric blood transfusion and to know the outcome in patients who had blood transfusion.

OBJECTIVES OF THE STUDY : To study the clinical status of patients requiring blood transfusion. To study the effect of blood and blood components on patients health. To study the correlation of blood transfusions in maternal morbidity.

KEYWORDS : blood transfusion, hemorrhage., anemia of pregnancy, Massive transmission, auto-logous transfusion

REVIEW OF LITERATURE

According to a study in USA, the transfusion reactions in general population is 0.24%. TRALI -0.014%, circulatory overload 1 in 100, allergic reactions 1 in 330, fatal hemolytic reactions 1 in 2,50,000, non hemolytic 1 in 1,00,000.(1) Ensuring blood safety is also of utmost importance, as transfusion can transmit human immunodeficiency virus (HIV)(2), hepatitis, syphilis, Chagas disease, and malaria.

MATERIALS AND METHODS

SAMPLE SIZE: A total number of 500 patients who were given blood transfusion during the period of study.

INCLUSION CRITERIA: All patients who are having blood transfusion antepartum, intrapartum and postpartum. Patient with Hb< 7gm/dl. Postpartum patients with blood loss> 1000ml.

METHOD OF STUDY: Once the aforementioned inclusion criteria are admitted, informed consent is taken for inclusion in the study. A careful history followed by general physical and systemic examinations. Baseline investigations followed by relevant investigations like regrouping and re-cross matching of the blood sample were done.

In the analysis of clinical findings elaborate history regarding the modes of presentation, the indication of blood transfusion, the number of blood products transfused, type of blood products transfused, the well being of the patient after transfusion and basic investigations were also documented. All volunteers of this study were subjected to basic investigations like blood grouping and typing, screening, complete hemogram, repeat Hb%, bleeding time, clotting time, coagulation profile. Details of the history, physical examination and lab reports were noted from time to time. No effort was made to gather follow-up

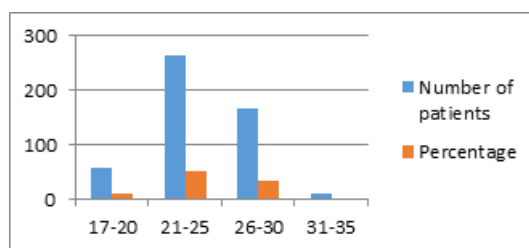
In Obstetrics blood transfusion is required. 1.anemia of pregnancy, 2.major obstetric hemorrhage. Anemia of pregnancy according to W.H.O is defined as hemoglobin level below 11g/dl. High prevalence area is defined as areas with>40%. India comes under high prevalence area of anemia. Obstetric hemorrhage includes both antepartum and post partum haemorrhage.

In the present study the percent of subjects with Hb range of 4-5gm is 54%. Proper antenatal check-ups can reduce this percent. Improvement in the general condition is present in almost 97% of the subjects. In many Indian and south Asian studies blood transfusion was given to subjects with Hb <7 gms .(3)(1)(2)(5). The incidence of blood transfusions in pregnancies in the present study is 10.5%. it is similar to other studies(4).(37). In emergencies it is 37%(4). (37). In the present study it is 50%. In the present study the most common indication of blood transfusion is anemia

1. AGE WISE DISTRBUION

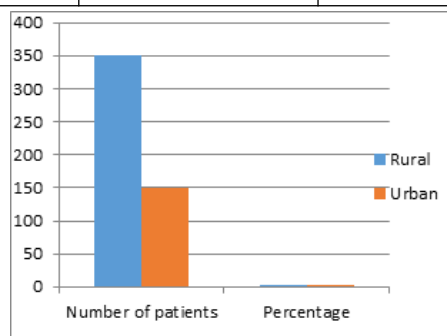
Age	Number of patients	Percentage
17-20	57	11.4
21-25	265	53
26-30	168	33.6
31-35	10	2

AGE WISE DISTRIBUTION



More in 21-25 yrs.

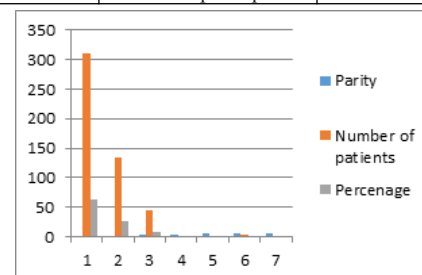
Area	Number of patients	Percentage
Rural	350	70%
Urban	150	30%



2. More in rural population.

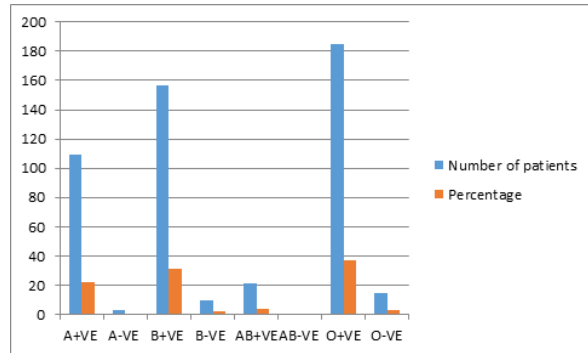
3. PARITY WISE DISTRIBUTION

Parity	Number of patients	Percentage
1	311	62.2
2	134	26.8
3	45	9
4	2	0.4
5	2	0.4
6	3	0.6
7	2	0.4
More in primi para		



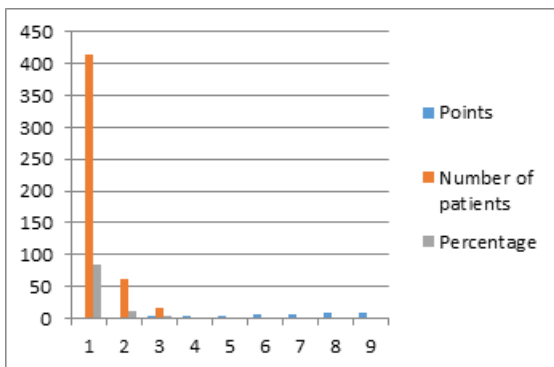
4. DISTRIBUTION BASED ON BLOOD GROUPS

Blood group	Number of patients	Percentage
A+VE	109	21.8
A-VE	3	0.6
B+VE	157	31.4
B-VE	10	2
AB+VE	21	4.2
AB-VE	0	0
O+VE	185	37
O-VE	15	3



More in B+ve. 5.

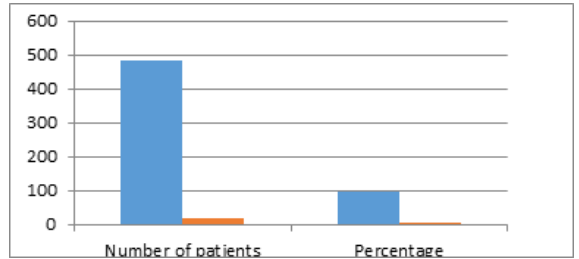
Points transfused	Number of patients	Percentage
Fresh blood	4	0.8
Whole blood	305	61
Platelets	2	0.4
Massive transmission	4	0.8
Packed R.B.C +Platelets	1	0.2
Packed R.B.C	184	36.8
MORE PERCENT IS WHOLE BLOOD TRANSFUSION. NUMBER OF BLOOD POINTS		
	Number of patients	Percentage
1	414	83.4
2	61	12.2
3	17	3.4
4	1	0.2
5	1	0.2
6	2	0.4
7	2	0.4
8	1	0.2
9	1	0.2



Most population needed single point of transfusion.

TABLE SHOWING TRANSFUSION REACTIONS

Transfusion reaction	Number of patients	Percentage
no	483	96.6
yes	17	3.4



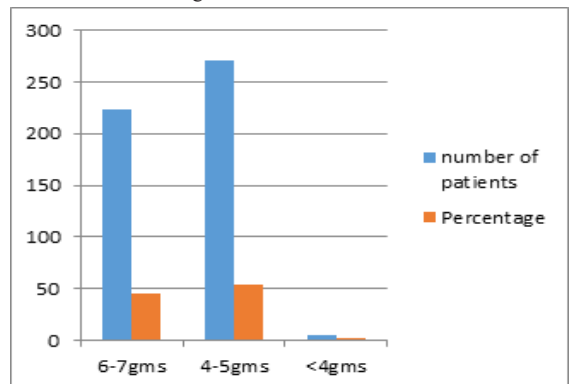
Transfusion reactions seen in 3.4%

6.TABLE SHOWING DISTRIBUTION BASED ON TYPE OF REACTIO

Type of reaction	Number of patients	Percentage
Chest pain	3	0.6
Chills	1	0.2
Fever chills	3	0.6
Breathlessness, Renal failure	1	0.2
Breathlessness, chest pain	1	0.2
Suspected DIC	1	0.2
Febrile	3	0.6
Mismatched SS transfusion	1	0.20%
Generalised rash	6	1.20%
No	480	96%

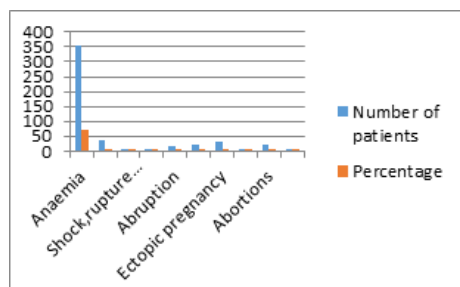
Most common transfusion reaction is generalised rash followed by febrile reaction and chills.

7. Most common in 4-5 gm%



8.TABLES SHOWING INDICATIONS OF BLOOD TRANSFUSION

Indications of blood transfusion	Number of patients	Percentage
Anaemia	353	70.6
P.P.H	36	7.2
Shock, rupture uterus	2	0.4
Pl.previa	7	1.4
Abruption	19	3.8
Surgical loss	23	4.6
Ectopic pregnancy	30	6
Traumatic p.p.h	2	0.4
Abortions	22	4.4
Molar pregnancy	6	1.2



Most common indication is anemia.

MMR	Number of patients	Percentage
yes	6	1.2
No	494	98.8

Foetal mortality	Number of patients	Percentage
yes	10	2
No	490	98

Discussion : In Obstetrics blood transfusion is required. 1.anemia of pregnancy, 2.major obstetric hemorrhage. Anemia of pregnancy according to W.H.O is defined as hemoglobin level below 11g/dl.. High prevalence area is defined as areas with >40% . India comes under high prevalence area of anemia. Obstetric hemorrhage includes both antepartum and post-partum haemorrhage. postpartum hemorrhage accounts for nearly 38% of all maternal deaths(5) ; this is more than the Indian Council of Medical Research's (ICMR) estimate of 25,000 deaths every year(5) . As more than half of the women of reproductive age are mild to severely anaemic (6), they are very vulnerable to dying from bleeding. As the majority (65%) of births take place at home (in some areas, it is almost 92%), and a large proportion are assisted by unskilled personnel(6) , Rural 53% population primi garavida in teenage to 21 to 24 years required blood transfusions. In this study the transfusion reactions are more common in multigravida(6). This is attributed to sensitization and subsequent formation of antibodies resulting from fetomaternal transfusion that may occur in previous pregnancies(6) . In many Indian and south Asian studies blood transfusion was given to subjects with Hb <7 gms (6).. The incidence of blood transfusions in pregnancies in the present study is 10.5%. it is similar to other studies.(6). In emergencies it is 37%. (37). In the present study it is 50%. In the present study the most common indication of blood transfusion is anemia This result correlates with a study at Rawalpindi where the hospital is also a tertiary care center and most of the cases being referral cases.(6). When coming to hemorrhage post partum hemorrhage is obviously the most common cause followed by surgical loss of blood which undoubtedly indicate that caesarean section is a morbidity by itself to the mother. Anemia, pph, Placenta previa, abruption , Molar pregnancy ectopic pregnancy, incomplete abortion are the most common indication for blood transfusion. Alexander et al., in an observational study of massive obstetric hemorrhage at Parkland hospital, showed whole blood to be superior to PRBCs or combined transfusions in preventing acute tubular necrosis and other complications(7). The availability of fresh warm blood in developing countries could provide an alternative to more expensive and infrastructure-dependent blood components(2). Whole blood replaces many coagulation factors, and its plasma expands blood volume. It has the added advantage of exposing the patient to fewer donors . in the present study whole blood transfusion percent is more which account to 61%. In our maternity the practice of whole blood transfusion is being followed.necessary every year. MMR and morbidity also can be brought still down There was MMR in the present study of 1.2% . all the cases were due to late referrals which again stress the importance of strengthening the FRUs. In this study the problem was not due to transfusion associated reactions.

SUMMARY: The role of blood transfusions in subjects who are receiving blood transfusion is studied in the present study : Blood transfusion is one of the essential component in the EmoC. In the present study the most common indication for blood transfusion is anemia which is a preventable cause. Awareness regarding blood transfusion and blood transfusion services, and measures to be taken to prevent transfusion should reach the grass root level. The FRUs should be strengthened . MMR is most commonly seen due to late referrals . The blood transfusions should be reserved to patients who are haemodynamically stable. Awareness regarding better transfusion practices among practitioners is necessary. Institutional protocol regarding transfusion guidelines is necessary. A special audit regarding blood transfusion should be practiced.. Ensuring a safe supply of blood and blood products and the appropriate and rational clinical use of blood are important public-health responsibilities of every national and state government, especially for saving lives of mothers who need comprehensive EmOC services because of pregnancy-related haemorrhage, severe anaemia, or abortion is necessary.

CONCLUSION

Ensuring a safe supply of blood and blood products and the appropriate and rational clinical use of blood are important public-health

responsibilities of every national and state government, especially for saving lives of mothers who need comprehensive EmOC services because of pregnancy-related haemorrhage, severe anaemia, or abortion is necessary.

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