

Blood Transfusion in Caesarean section Obstetrician's perspective

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ABSTRACT

Background: Availability of blood, its products antibiotics and antenatal care has decreased the maternal mortality significantly in the developed countries. Maternal mortality is still very high in Pakistan. Above services are available in Pakistan but are not well organized especially those related to blood transfusion. Obstetricians practicing in Pakistan develop their practices about transfusion depending on the type of facilities available and the type of the patients they treat.

Aim: To see how the obstetricians in Pakistan plan about blood transfusion for caesarean sections

Methods: Authors collected the data prospectively from January 2014 to December 2015. A questionnaire was used to get the opinion of Obstetricians working in different cities of Pakistan. Those Obstetricians were selected who had done post graduation and were in practice for more than ten years, irrespective of whether they were working in Government or private hospitals.

Results: Among 92 Obstetricians who responded 27% were from Islamabad/Rawalpindi, 40.2 .1% from Lahore, 23.9% from Karachi and 8.6% from Quetta. 79.3% of consultants cross match blood for all caesarean sections while 26.1% don't cross match for all caesareans. 34.8 % of consultants arrange blood for all caesarean sections while 65.3% don't cross match for all caesareans. Blood transfusion practices of consultants were different for elective and emergency caesarean sections. All consultants transfuse blood in less than 30% of their elective caesarean sections. In emergency caesarean sections 90% of consultants transfuse blood in less than 30% of their Caesarean

Conclusion: There is no need to cross match and arrange blood for all caesarean section. Only small percentage of patients need blood transfusion in caesareans, Cross match and arrangement of blood should only be done in selected high risk patients

Keywords: Blood transfusion, caesarean section

INTRODUCTION

Availability of blood and its products, antibiotics and antenatal care has decreased the maternal mortality and morbidity in developed countries. Maternal mortality rate is still high in Pakistan even though all above services are available. According to WHO fact sheet of 2015 most common reason for maternal mortality in under developed countries is inequalities in access to health care services.

These services are not well organized in Pakistan especially those related to blood transfusion .Most of the hospitals where cesarean sections are done have their own systems. Group specific blood is often cross-matched for patients scheduled for caesarean section in anticipation of hemorrhage¹. In most of the places it is arranged and stored as well .In how many cases transfusion is required ,who are these patients and why not these arrangements for normal delivery ? Many studies are done to answer these questions.

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Another aspect is hazards of blood transfusion. We have to consider them whenever planning transfusion of blood and its products. Some of these complications are immediate and life threatening while others may cause lifelong morbidity. Spread of Hepatitis B,C and other blood borne diseases like HIV has increased the worries of health professionals^{2,3}.

Obstetricians practicing in Pakistan develop their practices about transfusion depending on the type of facilities available and type of patients they treat .We designed this study to see how the obstetricians plan about blood transfusion for cesarean section in different cities of Pakistan and to formulate some suggestions which are applicable to our set up in Pakistan .

METHOD

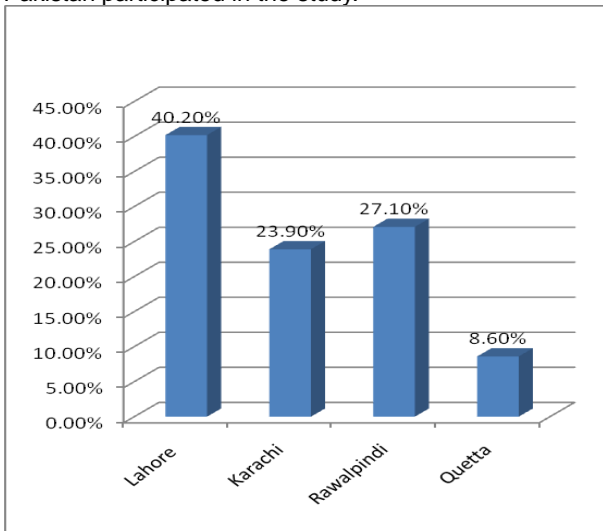
It was a prospective study done by the authors who are working at Shalamar Medical and Dental College from January 2014 to December 2015.Permission was obtained from Ethical review board of Shalamar Medical and Dental College. A questionnaire was used to get the opinion of the obstetricians practicing in different cities of Pakistan. Those obstetricians were

included who had post graduate degree in obstetrics and Gynecology and were in clinical practice for at-least ten years. They were working at either government or private hospital. Some of them were working in both type of hospitals and their practices were different in different places because of different circumstances so they were asked to fill in the details of one place only. Those gynecologist were excluded who did not have post graduate degree or who were in practice for less than ten years .Questionnaire included questions about their practices of cross match and arrangement of blood before operation. It also included questions about actual transfusions required in their patients in caesarean sections

RESULTS

The data was collected from 92 obstetricians and gynecologist practicing in different cities of Pakistan. 27.1% consultants were from Islamabad/Pindi, 40.2% were from Lahore, 23.9% were from Karachi and 8.6% were from Quetta. Out of these 92 consultants 55.4% are working in government hospitals and 44.5% are working both in private and government hospitals. Data collected showed that 73.9% of consultants prefer to cross match for all cesareans and 26% do not cross match for all cesareans.34.6% of consultants arrange and store blood but 67.3% do not arrange blood for all caesarean sections.

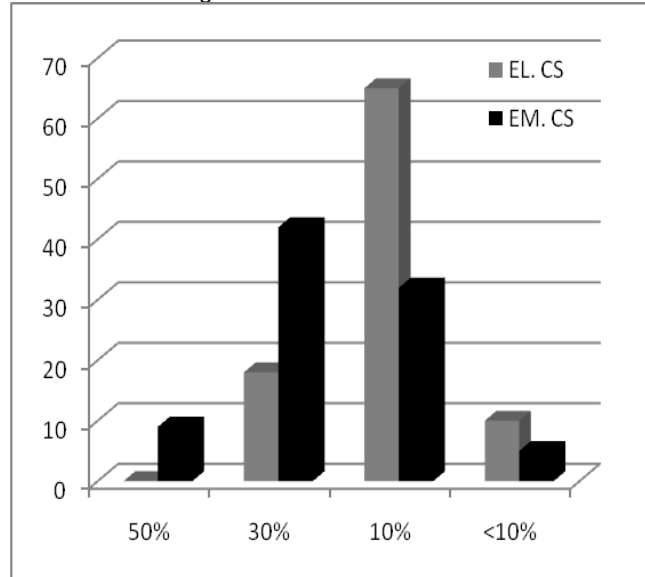
Fig.1: Percentage of obstetrician from different cities of Pakistan participated in the study.



Blood transfusion practices of consultants were different for elective and emergency caesarean sections. In elective caesarean sections 70% of consultants said they transfuse blood in 10% of cases 12% transfuse in less than 10% of cases and 18% transfuse in 30% of their cases .In short all the

consultants said that they transfuse blood in 30 or less than 30% of their Elective caesarean sections. In emergency caesarean section 10% of consultants transfuse in 50% of cases , 48% of consultants transfuse in 30% of their cases , 36% transfuse in 10% of their cases and 6% transfuse in less than 10% of cases . So in emergency caesarean sections 90% of consultants transfuse blood in 30 or less than 30% of their caesarean sections

Fig. 2: Percentage of obstetricians who used blood transfusions during C-sections



DISCUSSION

There is declining trends for the use of blood and blood products throughout the world due to the hazards associated with blood transfusion⁴. In our study we also found that most of our consultants did not arrange blood for all cesarean sections. A prospective analysis was done in UK covering 30 years to see blood loss and blood transfusion trends for cesarean sections. Results of the study showed transfusion rate is declined from 22 percent in 1976 to 4 to 5% in 1996-2006⁵. An other study conducted in India to determine success rate of labor after cesarean section in rural India in 2013, also revealed that blood transfusion is required in only 2 percent of deliveries by cesarean section⁶. In our study only caesarean section were included and majority of the consultants transfused blood in less than 30% of cases, A study conducted in Agha Khan university hospital Pakistan to evaluate blood ordering practices and blood transfusion during cesarean section also suggested that routine cross match prior to cesarean section should be re evaluated.⁷ A study conducted in India about blood transfusion practices in women undergoing cesarean delivery also recommended that

blood arrangement is justified only in high risk women⁸. Chhabra S and Namyyal A also advocated appropriate use and arrangement of blood for preventing the risk of transfusion transmitted infections⁹. RCOG guidelines also recommend less use of blood and blood products and minimum blood loss and good HB level at delivery decrease the need for blood^{3,8}. Our study is different from these studies as we did not look into patients data; rather it was consultants data of their practices. There are global trends to avoid blood transfusions because of hazards associated with blood transfusions and increase spread of hepatitis and HIV. Both international and national forums favour decrease use of blood and blood products^{10,11,12}.

CONCLUSION

We concluded from the above study that although blood transfusion is an important component of obstetric services but that there is no need to cross match and arrange blood for all patients for cesarean section, in actual practice only small percentage of patients blood transfusion is required. Multidisciplinary care involving obstetrician, hematologist and anesthetist will decrease the need for blood arrangement for all cesarean sections.

We recommend blood should be arranged for high risk cases only. However large audits are still required to justify our practices of arrangement of blood for patients undergoing cesarean delivery.

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