

To Determine Patients' Perceptions and Attitudes for Blood Transfusion

Sultana Habibullah¹, Shakil Ahmed Dahar¹, Junaid Ashraf¹, M. Shakeel Aamir Mullick²
PMRC Research Centre, Dow Medical College¹, Civil Hospital², Karachi.

Abstract

Background: Blood transfusion is a risky procedure due to transmission of various infections and reactions of unmatched blood transfusion. Many blood transfusion related problems can be prevented to some extent if patients and their family members are involved in transfusion related procedure.

Objectives: To determine patients' perceptions for the recall of consent process, risks, benefits and attitude for blood transfusion.

Study design, settings and duration: Hospital based cross-sectional study done on adult patients admitted in Orthopedic and Surgical wards of Civil Hospital, Karachi from November 2014 to January 2015.

Patients and Methods: Using convenient sampling, a total of 350 patients who were admitted and received blood transfusion were included in the study. Variables included age, gender, educational status, language spoken, recall of consent for blood transfusion, risks, benefits and attitudes for blood transfusion. Questionnaire based instrument was used for data collection. SPSS version 16 was used for descriptive frequencies.

Results: Of the total 98% patients were neither asked nor recalled for the consent of blood transfusion. Only 19 (5%) patients were informed about the risks and 77 (22%) about the benefits of blood transfusion. About 236 (67%) patients were of the opinion that blood of family members, if transfused, carries fewer chances of risk/reactions and 213 (61%) patients stated that they will prefer to receive blood transfusion from their family members. Only, 16 (5%) said that would refuse blood transfusion even if it was needed and will prefer blood alternatives. Overall 326 (93%) patients had poor perception and 262 (75%) good perception for blood transfusion.

Conclusion: The consent for blood transfusion was missing in majority of the cases and risks and benefits were not explained to the patients.

Policy statement: Institutional Bioethics Committees should take notice of these shortcomings.

Key words: Blood transfusion consent, risks benefits.

Introduction

It has been estimated that 1.5 million bags of blood are required annually in Pakistan, major portion of which is donated by the friends and relatives of the patient.¹ Blood transfusion is a risky procedure due to transmission of various infections and reactions due to

unmatched blood transfusion.² Globally, blood is available in limited amount and unnecessary transfusion may not benefit but harm the patient.³ Many blood transfusion related problems can be prevented to some extent if patients and their family members are involved in transfusion related procedure.² It is essential that patient should be informed about the risks and benefits of blood transfusion and their consent should be documented.⁴ Blood transfusion is taken as a life saving procedure, therefore this study was conducted to find out the perceived risk of blood transfusion by the public.

Patients and Methods

Hospital based cross-sectional study was conducted on adult patients admitted in Orthopedic and Surgical wards of Civil Hospital, Karachi from November 2014-January 2015.

Sample size calculated by 35%⁵ prevalence of perception for blood transfusion among patients at 95% confidence interval (CI) and 5% precision level was 350.⁶

Corresponding Author:

Sultana Habibullah
PMRC Research Centre
Dow Medical College
Karachi.
Email: s.habib@duhs.edu.pk

Received: 26 May 2015, **Accepted:** 30 May 2016,
Published: 20 June 2016

Authors Contribution

SH has done the conceptualization of project, literature search, statistical analysis, drafting, revision and writing of manuscript. SAD did the collected data. JA and MSAM did the supervision of the project and helped to get permission.

Convenient sampling technique was used for the selection of study subjects.

Variables included age, gender, educational status, language spoken (ethnicity), recall of taking consent for blood transfusion, risks, benefits and their attitudes for blood transfusion.

All adult patients admitted in Surgical and Orthopedic wards of Civil Hospital, Karachi who had received blood transfusion during admission from November 2014 to January 2015 were included in the study. Serious patients who were unable to communicate were excluded.

Questionnaire based data collection instrument was used. Nine questions were related to perception while 6 were related to attitude and the total score for perception and attitude was 13 and 8. A score of 60% and more was graded as good and below 59% was graded as poor (Table-1).

The study was approved by Institutional Review Board of Dow University of Health Sciences, Karachi.

Data was analyzed on computer package SPSS version 16, for descriptive frequencies.

Table 1: Total score for perception and attitude.

Perception	Score
Q.no-9	1
Q.no-10	1
Q.no-11	1
Q.no-12	3
Q.no-13	2
Q.no-14	2
Q.no-15	1
Q.no-16	1
Q.no-17	1
Total	13
Attitude	
Q.no-18	2
Q.no-19	1
Q.no-20	2
Q.no-21	1
Q.no-22	1
Q.no-23	1
Total	8

Results

A total of 350 patients admitted in Orthopedic (83) and Surgical wards (267) of Civil Hospital, Karachi and who had received blood transfusion were interviewed using a questionnaire based instrument.

Table 2: Age & gender of blood recipients.

Age groups	Male (n=204)	Female (n=146)	Total n(%)
<30 years	106	47	153(44)
31-60 years	85	86	171(49)
61+ years	13	13	26(7)
Total	204(58%)	146(42%)	350(100)

There were 204 (58%) males with a male to female ratio of 1.4:1. Median age was 35 with 171 (49%) between 31-60 years (Table-2). Educationally, 192 (55%) were illiterate and 101 (29%) were Sindhi speaking while 225 (65%) were residents of Karachi.

Major reason for admission was Gastro-intestinal diseases (60=17% cases) followed by accidents (40=11%), gunshot (32=9%) and malignancies (18=5%). Most (223=64%) patients were told that they need blood transfusion due to anemia. All except 2% patients were neither asked nor could recall giving any consent for blood transfusion. Only (19=5%) patients said that they were informed about the risk and (77=22%) about the benefits of blood transfusion by the health staff. Only 56 (16%) patients knew that Hepatitis B,C and AIDS can be transmitted through blood transfusion but none knew that incorrect/unmatched blood transfusion also carries a risk. The study showed that 236 (67%) patients were of the opinion that blood from a family member carries fewer chances of risks/reactions and 213 (61%) said that they will prefer blood transfusion from their family members only (Table-3). Majority of the patients (334=95%) stated that they would go by the decision of doctor for blood transfusion and only 16 (5%) said that they would refuse a transfusion even if it is needed and will go for an alternate to blood transfusion.

Table 3: Perception of risk and choice of blood by recipients.

Blood donated	Perception of less risk n(%)	Choice of blood n(%)
By any person	8(2)	18(5)
By family members	236(67)	213(61)
By relatives	76(22)	149(43)

Table 4: Attitudes, 95% CI and p value of blood recipients.

Variables	Good Attitude	95% CI	p value
Age groups			
<30 years	113	1.33-1.19	
31-60 years	128	1.31-1.18	>0.05
61+ years	21/262	1.35-1.03	
Gender			
Male	157	1.28-1.17	>0.05
Female	105/262	1.35-1.20	
Educational status			
Illiterate	132	1.37-1.24	
Primary	66	1.27-1.09	<0.05
Secondary	35	1.30-1.06	
Higher	29/262	1.27-1.02	
Ethnicity			
Urdu speaking	79	1.24-1.09	
Sindhi speaking	79	1.29-1.13	
Baluchi speaking	31	1.50-1.22	<0.05
Punjabi speaking	21	1.21-0.96	
Pushto speaking	26	1.51-1.21	
Other languages	26/262	1.51-1.21	

Almost 312 (89%) patients were in the favor of taking consent prior to blood transfusion and 323 (92%) were of the opinion that information of blood transfusion process should be shared with them. Following a blood transfusion, 32% patients had history of fever for 24 -48 hours.

The study showed that 326 (93%) patients had poor perceptions about blood transfusion and 262 (75%) had good attitude for blood transfusion (Table-4).

Discussion

In this study, majority of blood transfusion recipients had poor perception but good attitude for blood transfusion and 98% had no recollection for giving a consent for transfusion. A study from Canada showed that 80% patients recalled giving the consent, 40% had no recall and 25% stated that information regarding risks due to unmatched blood transfusion was not given.⁷ Another study from South Africa showed that 21% patients had documented consent and 11% stated that consent was not clearly understood by them.⁸ In our study only 5% had received information on risks and 22% on the benefits of blood transfusion which are consistent with the findings of a study conducted in England where 71% received no or little information related to transfusion.⁹ It has been found that perceptions about risk for blood transfusion can influence the patient's attitude for consent. A study conducted in Pakistan reported that 35% hospitalized patients were reluctant for blood transfusion and similarly 20% Saudi patients refused blood transfusion.^{5,10} In the same study 49% patients favored accepting blood from their relatives and family members to reduce the risk for infection and this is consistent with the findings of this study.¹⁰ Blood recipients feel comfortable if information about blood transfusion, its advantages and disadvantages were shared with them but still some of them feel uncomfortable.¹¹

The limitations of the study were that it was conducted in one major public sector hospital end may not reflect system of private sector hospitals or other public sector hospitals. However, the study highlights that informed consent process does not exist; risk and benefits of blood transfusion are not explained to the recipients in this hospital.

Acknowledgement

The funds of this study were provided by Pakistan Medical Research Council; Head of Surgical and Orthopedic units of Civil Hospital, Karachi is acknowledged for giving permission to collect data from their wards.

Conflict of interest: None declared.

References

1. WHO EMRO. Blood Safety Programmes, Pakistan. (Accessed on 3rd March, 2015) Available from URL: <http://www.emro.who.int/pak/programmes/blood-safety.html>
2. Davis RE, Vincent CA, Murphy MF. Blood transfusion safety: The potential role of the patient. *Transfusion Medicine Reviews* 2011; 25: 12-23.
3. Frank SM, Savage WJ, Rothschild JA, Rivers RJ, Ness PM, Paul SL et al. Variability in blood and blood component utilization as assessed by an anesthesia information management system. *Anesthesiology* 2012; 117: 99-106.
4. Davis R, Vincent C, Sud A, Noel S, Moss R, Asgheddi M, et al. Consent to transfusion: patients' and healthcare professionals' attitudes towards the provision of blood transfusion information. *Transfusion Med* 2012; 22: 167-72.
5. Luby SP, Niaz T, Siddiqui S, Mujeeb SA, Fisher-Hochs S. Patients' perceptions of blood transfusion risks in Karachi, Pakistan. *Int J Infect Dis* 2001; 5: 24-6.
6. Lawanga SK, Lemeshow S. Sample size determination in Health Studies. World Health Organization Geneva 1991: 25.
7. Chan T, Eckert K, Venesoen P, Leslie K, Chin-Yee I. Consenting to blood: what patients remember? *Transfusion Medicine* 2005; 15: 461-42.
8. Barrett CL, Joubert D, Griffiths VP, Ebersohn S, Joubert G, Louw VJ et al. Patients' recall and perceptions regarding consent to blood transfusion at Universitas Academic Hospital, Bloemfontein, South Africa 2014; 51: 19-24.
9. LeMay S, Hardy JF, Harel F, Taillefer MC, Dupuis G. Patients' perceptions of cardiac anesthesia service: a pilot study. *Can J Anaesth* 2001; 48: 1127-42.
10. Al-Drees AM. Attitudes, beliefs and knowledge about blood donation and transfusion in Saudi population *Pak J Med Sci* 2008; 24: 74-9.
11. Cheung D, Lieberman L, Lin Y, Callum J. Consent for blood transfusion: do patients understand the risks and benefits? *Transfus Med* 2014; 24: 269-73.