

KNOWLEDGE OF BLOOD TRANSFUSIONS, ITS COMPLICATIONS & INFORMED CONSENT AMONG MEDICAL STUDENTS OF PUBLIC & PRIVATE SECTOR MEDICAL COLLEGES OF PESHAWAR

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ABSTRACT

Objective: The objective of our study was to find out difference in awareness among medical students of private and public sector medical colleges and also to assess their knowledge about the need of informed consent prior to blood transfusion.

Methodology: A descriptive study was done based upon a designed questionnaire. The duration of our study was from July 2012 to September 2012. The data was collected from various Government and private sector medical colleges of Peshawar.

Result: The result shows that the public sector medical students had better awareness regarding process and complications of blood transfusions. Analysis showed that Public sector medical students selected more accurate answers than private sector medical students. Most of the participants had witnessed blood transfusions.

Conclusion: Most students had concept of need of informed consent, blood transfusion as well transfusion reactions.

Key Words: Blood transfusion, Transfusion Reactions, Medical colleges, Awareness, consent

INTRODUCTION

Blood transfusion is one of the most crucial needs in multiple diseases and injuries and the only source of blood is donation. Blood transfusion is one of the main components of care and treatment to patients with serious conditions such as trauma, major surgeries, chemotherapy and patient in need of long term therapies.⁽¹⁾ However, problems regarding a permanent shortage of blood are observed in blood services all over the world. A person can experience a relatively minor injury and suffer fatal exsanguination.²

Blood transfusion is the process of receiving blood components into ones circulation. Transfused blood may contain Packed Red Cells, Fresh Frozen Plasma, platelets, albumin protein, clotting factor concentrates. These products are separated from the donated blood via fractionation and then given to the patients as per need.⁴ Screening of blood before transfusion is of immense importance as it prevents blood borne diseases as well as transfusion reactions.³

The aims of this study were to assess knowledge of medical students regarding transfusion reactions and

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need of Informed consent before transfusion of blood & blood products.

MATERIALS AND METHODS

In this study 300 students were selected through simple random sampling method. 150 Questionnaires were distributed among students of private sector medical colleges (Peshawar medical college & Rehman medical college) and the rest of 150 were distributed among students of Public sector medical colleges (Khyber medical college, Khyber Girls Medical College). Students of third, fourth and final year were included as study population. All questionnaires were completely answered and thoroughly analyzed. The age of the participants ranged from 21 to 26. Table 1 illustrates the number of questionnaires distributed amongst the students of various years of private and government medical students.

RESULTS

Knowledge of blood transfusion among students was measured using 21 questions which comprised of the assessment of knowledge and awareness of blood transfusion and informed consent amongst medical students of private and government sector medical college. The questions included the need of blood donation, common blood transfusion reactions including Transfusion related acute lung injury or TRALI, informed consent before blood transfusion with its medico legal importance.

The overall knowledge on blood transfusion

Table: 1 Year and Sector wise distribution of the Questionnaires

Year of Medical School	FREQUENCY
A) Private Sector	
i) 3rd Year	35
ii) 4th Year	45
iii) 5th Year	70
B) Government Sector	
i) 3rd Year	30
ii) 4th Year	55
iii) 5th Year	65

Table 2. Knowledge about blood transfusion in medical students

QUESTIONS	CORRECT ANSWERS	
	Private Sector (n = 150)	Public Sector (n = 150)
Most common transfusion reaction	56	82
Understanding of the word TRALI	40	58
When is the cut off to call a transfusion reaction acute	60	72
Commonly used blood products	49	61
Need to obtain an informed consent	131	137
Who is authorized to give an informed consent	96	112
When is blood transfusion needed	90	116
What is meant by autologous transfusion	101	111

among respondents of government medical colleges was observed to be better compared to private sector students. Overall, 58.6 % students had donated blood while 41.3% had never donated blood. The number of participants who had witnessed blood transfusion was slightly higher among private sector students (137 out of 150) compared to government sector students (133 out of 150). The results regarding TRALI among the respondents were disappointing as both private and government sector students did not have any knowledge about Transfusion related Acute Lung Injury or TRALI. Regarding the need to obtain an informed consent before Transfusion a vast majority of the students (89.3%) responded positively and appreciated its medico legal importance.

Table 2 demonstrates that the number of students who correctly answered the questions, given to study the extent of their awareness regarding blood transfusion, are higher amongst the government medical colleges as compared to the private.

DISCUSSION

Through the analysis of research data, the results show that there is a good level of understanding and awareness regarding informed consent and blood transfusion. However the awareness is slightly more in public sector as compared to private sector. All respondents claimed to have heard about blood transfusion and informed consent. The findings showed that the student's knowledge of blood transfusion was average and could be improved. Out of 300 respondents, 40% had donated blood, with more than half being public university students and with 90% of the students having had at least witnessed transfusion procedures. Most of the students were aware of the blood products used in transfusions. 50% of students were correct about the different types of transfusion reactions including most common ones i.e. febrile and allergic reactions. However a large proportion (66%) was unaware of TRALI (transfusion reaction related acute lung injury).^{3,6,8,10}

Most of the students were well informed (70%) of the facts about informed consent which are knowing that informed consent is taken before most medical procedures and also of the prerequisites, such as need to explain the procedure and complications to the patient. They were also aware of its medico legal importance. A lot of students knew the meaning of autologous transfusion and how to prevent the consequence of hypothermia from transfusion of cold blood. However surprisingly many participants did not know about Rhesus factor being tested in screening, which is of great importance.^{4,5,7,12}

The participants from public sector institutions had better knowledge regarding blood transfusions. More students are aware of the procedures, how they are performed, what the consequences may be and also a little more into the detail of contents of the blood, blood typing and reactions. They are also more aware of any facts related to informed consent taken for the transfusion. This may be due to a number of factors such as level of exposure, interest of the students, skills attained at teaching institution and importance of that particular institution regarding awareness about transfusions.¹²

Blood transfusion therapy has become an issue of increasing concern to both the general public and to health practitioners. medical college's education about risk factors and prevention of transfusion reactions awareness programs are found necessary for all students in order to improve awareness of these reactions. medical colleges, both public and private, are recommended to increase awareness by carrying

out seminar and special lecture series, regarding blood transfusions.^{4,9,11}

CONCLUSION

Medical students have enough exposure to blood transfusions but there is a need to further enhance their knowledge regarding complications of transfusions and the medico legal implications of an informed consent.

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