

Knowledge, attitude and practices about hemovigilance among practitioners: a cross-sectional study

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ABSTRACT

Background: Transfusion by blood and blood products forms an important part of treatment. But this is not free from transfusion reactions which may be in the form of fever, rashes, shivering, anaphylaxis or even death. Hemovigilance is a programme of reporting such events.

Methods: The present study was conducted in a tertiary care Government Medical College, Jammu. Permission was taken from institutional ethics committee, Government Medical College, Jammu. A pretested questionnaire was prepared and circulated among practitioners. They were given time of 15 minutes to fill that questionnaire. After 15 minutes, the filled questionnaire was collected and was analyzed. The data was presented in tabulated form.

Results: Total 50 practitioners were included in the study. All the practitioners had knowledge about transfusion reactions. Only 10% of the practitioners had knowledge that transfusion reactions can be prevented, 40% of the practitioners had knowledge about hemovigilance programme and had an idea that transfusion reactions can be reported. But only 10% of the practitioners knew where to report and who can report, 6% knew how to report. Only 48% of the practitioners thought that transfusion reactions should be reported, 70% of the practitioners thought that transfusion reactions can be dangerous. 40% of practitioners told that seminars/continuing medical education should be planned. 80% of practitioners had encountered transfusion reactions, but only 2% had documented the same.

Conclusions: Overall, most of the practitioners have a positive attitude towards transfusion reaction reporting but knowledge regarding the haemovigilance concept is poor and the majority of them never reported such reaction. Hence, our study demands increased awareness and continued training to strengthen the haemovigilance system.

Keywords: Adverse transfusion reactions, Hemovigilance, Transfusion reaction reporting, Underreporting

INTRODUCTION

It is said that no drug is free of side effects, similar is the case with every blood product or whole blood, when transfused to the patient as blood is also a type of drug as per Drug and Cosmetic Act.¹ Transfusion may be associated with any type or severity of reaction. A transfusion reaction may be defined as any type of untoward event, during or after transfusion for which no secondary reason is found.² Reporting of adverse drug event is very important part as after that necessary

medication if required may be given. Hemovigilance Programme has been launched in India in order to have a watch over the ADRs due to blood and blood product transfusion. The term hemovigilance was coined in France, hemo means related to blood and vigilance means watchful. Hemovigilance is defined as the surveillance of adverse drug reactions that occur in both donors and recipients and the epidemiological monitoring of donors as well. After pharmacovigilance, the hemovigilance programme was launched by Indian Pharmacopoeia Commission (IPC) in collaboration with National Institute of Biologics, Noida. It is a centralized,

structured programme which coordinates various activities of blood bank, hospital facilities, health care systems and transfusion services.³⁻⁷ The objective of this programme was to identify, monitor, and treat transfusion reactions, if they occur. It also creates awareness among the health care workers, doctors and nurses about the transfusion reactions, their reporting, timely treatment and identification of various risk factors associated with such reactions. It is an integral part of treatment like pharmacovigilance but still not implemented to its fullest in various Indian hospital set ups. There are many transfusion reactions world wide ranging from minor reactions to even death. Even in Indian setup rate of transfusion reactions ranges upto 1.6%.⁸ Review of literature could not find much studies on hemovigilance in Indian set up. So the present study was conducted to know about the trend of knowledge, attitude and practices among doctors about hemovigilance as doctors are one of the stakeholders besides other staff.

METHODS

The present study was conducted in a tertiary care hospital of Jammu. Permission was taken from institutional ethics committee, Government Medical College, Jammu. The study was conducted in the month of July, 2019. It was a cross-sectional study. A pretested questionnaire was prepared and circulated among practitioners. They were given time of 15 minutes to fill that questionnaire. After 15 minutes, the filled

questionnaire was taken back and were analyzed. The data was presented in tabulated form.

RESULTS

Total 50 practitioners were included in the study. A questionnaire was given having questions related to knowledge, attitude and practices related to hemovigilance. All the practitioners had knowledge about transfusion reactions. Only 10% of the practitioners had knowledge that transfusion reactions can be prevented, 40% of the practitioners had knowledge about hemovigilance programme and had an idea that transfusion reactions can be reported. But only 10% of the practitioners knew where to report and who can report, 6% knew how to report (Table 1). Only 48% of the practitioners thought that transfusion reactions should be reported, 70% of the practitioners thought that transfusion reactions can be dangerous. 40% of practitioners told that seminars/continuing medical education (CMEs) should be planned (Table 2). 80% of practitioners had encountered transfusion reactions, but only 2% had documented the same. 10% of the practitioners had attended seminars, CMEs (Table 3). Many reasons were quoted for not reporting transfusion reactions. 46.7% of the practitioners told that they lack knowledge about where to report and how to report. 22.2% told that they lack time, 2.22% said that lack of incentives is the reason. 13.3% had legal liability issues, 6.7% did not find it necessary to report, 8.9% had fear of negative effects of report (Table 4).

Table 1: Knowledge related questions.

Knowledge related questions	No. of practitioners
	N (%)
Do you have idea about transfusion reactions	
Yes	50 (100)
No	0
Do you have idea that transfusion reactions can be prevented	
Yes	45 (90)
No	5 (10)
Do you have knowledge about hemovigilance programme	
Yes	20 (40)
No	30 (60)
Do you have knowledge that blood transfusion reactions can be reported	
Yes	20 (40)
No	30 (60)
If yes, where to report	
Yes	5 (10)
No	15 (30)
Do you have knowledge that how to report transfusion reaction	
Yes	3 (6)
No	47 (94)
Do you have knowledge who can report transfusion reaction	
Yes	5 (10)
No	45 (90)

Table 2 Attitude related questions.

Attitude related questions	No. of practitioners
	N (%)
Do you think transfusion reactions should be reported	
Yes	24 (48)
No	26 (52)
Do you think transfusion reactions can be dangerous	
Yes	35 (70)
No	15 (30)
Do you think seminars/CMEs regarding transfusion reactions should be planned	
Yes	20 (40)
No	30 (60)

Table 3: Practice related questions.

Practice related questions	No. of practitioners
	N (%)
Have you ever found any transfusion reaction	
Yes	40 (80)
No	10 (20)
Have you ever documented a transfusion reaction	
Yes	1 (2)
No	49 (98)
Have you ever attended any seminars/CME on transfusion reactions or hemovigilance	
Yes	5 (10)
No	45 (90)

Table 4: Reasons for not reporting transfusion reactions.

Reason	No. of practitioners
	N (%)
Lack of knowledge where to report, how to report	21 (46.7)
Lack of time	10 (22.2)
Lack of incentives	1 (2.22)
Don't find it necessary to report	3 (6.7)
Legal liability issue	6 (13.3)
Fear of negative effects of report	4 (8.9)

DISCUSSION

Knowledge, attitude and practices regarding hemovigilance was seen in this study. Most of the doctors had knowledge about transfusion reactions similar to other studies.⁹ Only 10% of the practitioners had knowledge that transfusion reactions can be prevented, 40% of the practitioners had knowledge about hemovigilance programme and had an idea that transfusion reactions can be reported. But only 10% of the practitioners knew where to report and who can report, 6% knew how to report. The results are similar to various studies conducted on Knowledge, attitude and practices regarding hemovigilance.¹⁰ Only 48% of the practitioners thought that transfusion reactions should be reported, 70% of the practitioners thought that transfusion reactions can be dangerous. 40% of practitioners told that seminars/CMEs should be planned. These seminars and

CMEs can be helpful in imparting knowledge regarding hemovigilance to various doctors and other health care providers which can help in creating awareness.¹¹ 80% of practitioners had encountered transfusion reactions, but only 2% had documented the same. 10% of the practitioners had attended seminars, CMEs regarding transfusion reactions and it was suggested that such seminars should be planned regularly at different levels of health care systems. Many reasons were quoted for not reporting transfusion reactions. 46.7% of the practitioners told that they lack knowledge about where to report and how to report. 22.2% told that they lack time, 2.22% said that lack of incentives is the reason. 13.3% had legal liability issues, 6.7% did not find it necessary to report, 8.9% had fear of negative effects of report. The results are similar to study by Gupta et al as they had also described similar reasons for not reporting reactions.¹² Incentives should be provided for reporting such events and doctors and other stake holders should be informed properly that

there are no legal issues in reporting such events. Helpline toll free number should be generated where such transfusion reactions can be reported.

CONCLUSION

Very less number of practitioners was aware about this hemovigilance programme. There is a need for creating awareness among the health care providers regarding hemovigilance and reporting of transfusion reactions. There should be coordination between academics and health authorities and voluntary reporting should be encouraged.

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REFERENCES

1. Bisht A. Haemovigilance Programme of India-Organization structure. 2014. Available at: <http://www.ihnorg.com/wpcontent/uploads/2014/01/Haemovigilance-Programme-of-India-by-Akanksha-Bisht.pdf>. Accessed on 7 October 2019.
2. Gupta M, Kumar R, Gupta S, Kaur A. Acute transfusion reactions encountered in patients at a tertiary care centre in Punjab. *Natl Med J India*. 2015;28(1):8-11.
3. Sreekumar P, Kumar TP, Sarathi G, Gupta D. Haemovigilance-roles and global status in transfusion safety: a review. *IRJP*. 2016;7(12):5-7.
4. Sreekumar P, Kumar T, Sarathi G, Gupta D. Haemovigilance in India- a milestone in transfusion safety. *Int J Health Sci Res*. 2017;7(2):310-5.
5. Singh S, Bisht A, Singh S, Kalaiselvan V, Chopra V, Kumari P, et al. Review on haemovigilance practice in India. *WJPPS*. 2015;4(12):350-7.
6. Mukherjee S, Maiti R. Haemovigilance: a current update in Indian perspective. *J Clin Diagn Res*. 2016;10(11):EE05-9.
7. World Health Organisation. AIDE-MEMOIRE. National Haemovigilance System; 2015.
8. National Institute of Biologicals. Haemovigilance Newsletter. Available at: [http://emedinews.in/2015/IJCPebook/haemovigilance/files/haemovigilance%20newsletter%20vol%20no.%203,%20issue%206,%20julydecember%202015_ctc%20\(1\).pdf](http://emedinews.in/2015/IJCPebook/haemovigilance/files/haemovigilance%20newsletter%20vol%20no.%203,%20issue%206,%20julydecember%202015_ctc%20(1).pdf). Accessed on 7 October 2019.
9. Date A, Dashputra A, Borkar A. Knowledge attitude and practice of haemovigilance among doctors in tertiary care hospital in Nagpur, Maharashtra, India. *IJBCP*. 2017;5(3):788-93.
10. Shivgunde PP, Besekar SM, Bhojwani KM, Bhojwani DG. Knowledge, attitude and practice of haemovigilance amongst healthcare professionals in Nashik, Maharashtra, India. *Int J Basic Clin Pharmacol*. 2018;7:986-91.
11. John CA, Theodora UE, Gloria AN, Chika EA. Adverse reactions to blood donation: a descriptive study of 3520 blood donors in a Nigerian tertiary hospital. *Med J DY Patil Univ*. 2017;10:36-40.
12. Gupta SK, Nayak RP, Shivaranjani R, Vidarthi SK. A questionnaire study on the knowledge, attitude, and the practice of pharmacovigilance among the healthcare professionals in a teaching hospital in South India. *Perspect Clin Res*. 2015;6(1):45-52.

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