SOUVENIR BOOK

FIRST NATIONAL CONFERENCE ON HAEMOVIGILANCE

9th to 11th December, 2021
(Online Mode)

ORGANIZED BY
National Institute of Biologicals, NOIDA
Ministry of Health & Family Welfare, Government of India

CONTENTS

FOREWORD

I am immensely pleased to note that National Institute of Biologicals, NOIDA, Ministry of Health and Family Welfare, Government of India is bringing out the Souvenir Book on First National Conference on Haemovigilance held from 9th to 11th Dec 2021 (Online Mode) with an aim to create awareness among the healthcare professional about the Haemovigilance & to promote blood safety.

The Haemovigilance Programme of India (HvPI) is being implemented since year 2012, with NIB as the National Coordinating Centre. One of the Mandate's of NIB is to implement and co-ordinate activities of Haemovigilance Programme of India. The programme captures the Adverse Reactions associated with Blood Transfusion and Blood Donation. The programme aims to improve the safety & quality of blood being received to the patients with the view to promote & improve safe blood transfusion services in our country.

I am sure that this souvenir book would be of help to all who would like to know about the events of the First National Conference on Haemovigilance.

I would like to thank all the experts and all the participants of the conference who have contributed for the success of the National Conference on Haemovigilance.

Further, I would like to compliment the entire team of HvPI, NIB responsible for bringing out this publication & wish them all success in their endeavor.

(Dr. Anup Anvikar)
Director, NIB

Dated: 22/12/2021

ACKNOWLEDGEMENTS

National Institute of Biologicals (NIB) owes the success of the First National Conference on Haemovigilance (online mode) to the unstinted support provided by the Ministry of Health & Family Welfare, Government of India, Scientific Committee of the conference for finalization of the scientific program, Haemovigilance Experts, Chairpersons, Speakers and Jury Members for reviewing the abstract submitted for the National Conference on Haemovigilance.

Acknowledgements to the Haemovigilance Programme of India-team of National Institute of Biologicals for implementation of the First National Conference on Haemovigilance (online mode) for creating awareness among the stakeholders.

NIB wishes to thank to all the participants for attending & actively participating in the conference and making this conference a successful event.

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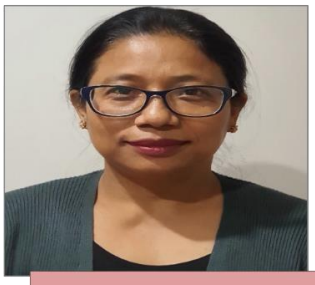

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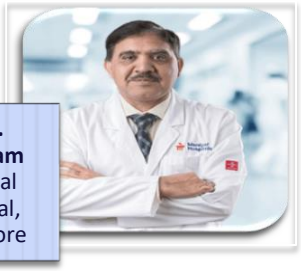

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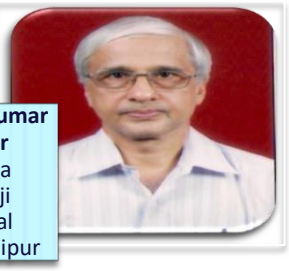

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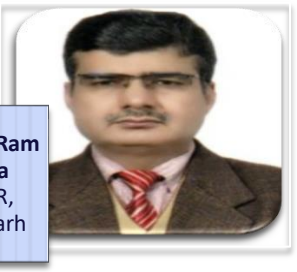

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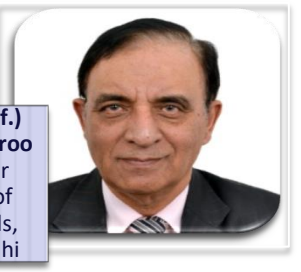

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BACKGROUND

The National Institute of Biologicals (NIB), NOIDA is an APEX autonomous Institute under the administrative control of Ministry of Health & Family Welfare, Government of India engaged in Quality Control Evaluation of various biological products like vaccines, blood products, blood reagents, sera, Immuno-diagnostic kits etc. produced and imported into India.

Haemovigilance is 'a set of surveillance procedures covering the whole transfusion chain from the collection of blood and its components to the follow-up of its recipients i.e. from the vein of the donor to the vein of the recipient. It is intended to collect and assess information on unexpected or undesirable effects resulting from the therapeutic use of labile blood products and to prevent their occurrence and recurrence'. Haemovigilance is a tool to improve the quality of the blood transfusion chain, primarily focusing on safety.

The Haemovigilance Programme of India is being implemented since year 2012, with National Institute of Biologicals, NOIDA, Ministry of Health & Family Welfare, Government of India as the National Coordinating Centre. The programme tracks the Adverse Reactions associated with Blood Transfusion and Blood Donation. This system includes monitoring, reporting investigation, identification and analysis of adverse reactions related to transfusion & Donation.

Reporting of Adverse Transfusion Reactions is done online via Haemo-Vigil software & reporting of Adverse Blood Donor Reactions is done via Donor-Vigil software available on NIB website i.e. www.nib.gov.in

Implementation and coordination of activities of Haemovigilance Programme of India became one of the Mandate' s of NIB as per its bye-laws 3.4.1 of the Institute as approved in the Governing Body meeting of NIB held under chairpersonship of Secretary (Health & F.W.)/ Chairman, Governing Body of NIB on 12th Dec, 2014.

India is a member of International Haemovigilance Network (IHN) since 2014.

Haemovigilance Programme of India entered into 10th year on 10.12.2021 & on this occasion the First National Conference on Haemovigilance (online mode) was organized by NIB for 3 days from 9th to 11th December, 2021.

Looking to the present COVID - 19 situation, NIB took this initiative of creating awareness among the healthcare fraternity through the online mode, on the subject of Haemovigilance, in a short duration of time and with a wider regional and national outreach to the stakeholders.

AIM

The aim of this program was to promote and improve safe blood transfusion services in India and to sensitize the fraternity about Haemovigilance Programme of India through online mode.

OBJECTIVES

The conference was organized with the following objectives:

- To create awareness about the HvPI.
- To encourage reporting under HvPI.
- To sensitize and train the Blood Centre officials w.r.t. guidelines, definitions.
- Improving quality of data submitted by the centres.
- To promote voluntary blood donations & promote safe blood donations.
- To strengthen blood services in the country.

EXPERTS/ SPEAKERS

Various aspects of National Haemovigilance Programme, Recipient Haemovigilance, Donor Haemovigilance, Blood Safety were taken by the eminent field experts from different organizations all across the country. The presentations/ interactions were delivered through the online mode with a vision to showcase a plethora of relevant topics in the field of Transfusion Medicine specifically on Haemovigilance to boost the knowledge and skills of the participants across country.

SALIENT FEATURES OF THE CONFERENCE

A well-structured 3 days program was organized which includes technical sessions on National Haemovigilance Programme, Recipient Haemovigilance, Donor Haemovigilance, Blood Safety with multiple discussions, debates and competitions.

The conference was conducted virtually through online platform.

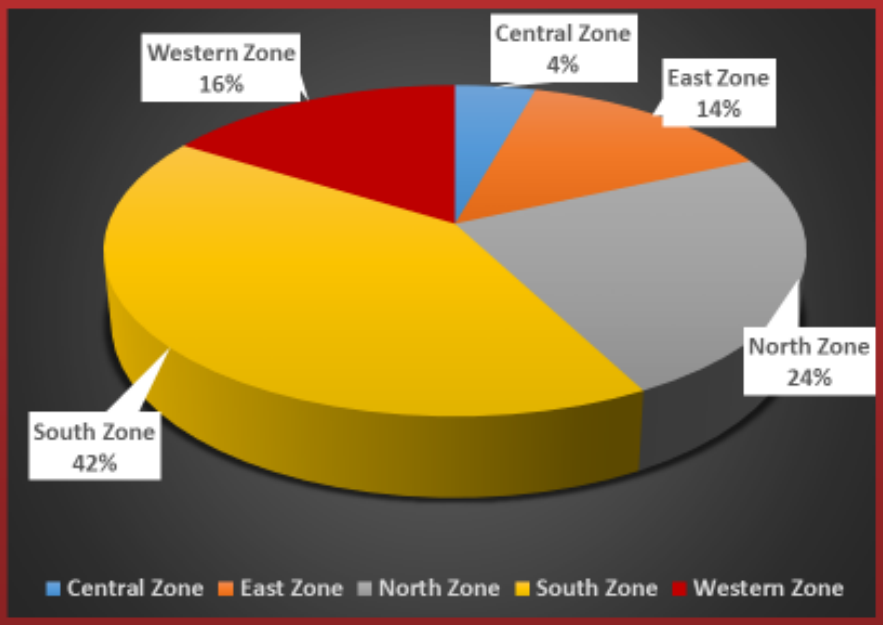
A total of 47 experts which included 13 Chairpersons, 20 speakers, 8 selected abstract presenters & 6 Jury Members (for reviewing the abstracts submitted) actively participated for the said conference from all across the country.

Around 2763 registrations were done for the conference. The audience included the blood centre officials, medical officers, professors, dean, doctors, clinicians, nurses, technical staff, blood donors, clinical pharmacists, regulatory officials, quality assurance officials & medical students etc. all across the country.

Apart from online platform many participants participated the conference through the live streaming on you tube channel of the First National Conference on Haemovigilance.

PARTICIPANT REGISTRATION FOR THE CONFERENCE=2763

Zone	Number of Registrations
Central Zone	120
East Zone	382
North Zone	667
South Zone	1147
Western Zone	447
Grand Total	2763



TECHNICAL SESSIONS

Technical sessions consist of various presentation, debate, Q & A Sessions on National Haemovigilance Programme, Recipient Haemovigilance, Donor Haemovigilance and Blood Safety. Further, the conference also includes invitations of abstracts from the participants from across the country and 8 selected abstracts were presented in the conference.
(Annexure 1- Program Schedule)

About 70 abstracts were submitted for the conference.

The abstracts were submitted under two different categories i.e. Recipient Haemovigilance & Donor Haemovigilance.

The Best 4 abstracts in each category i.e. Recipient Haemovigilance & Donor Haemovigilance authors presented their presentation during the main conference as reviewed by the jury members.

The best Abstracts selected for the oral presentations under Donor Haemovigilance:-

Study of Plateletpheresis Donor Hemovigilance and Materialovigilance in a Quaternary Care Centre in South India

Analysis of frequency and risk factors of vaso-vagal reaction in whole blood donors

Effective implementation of 'Donor Safety Culture' strategies to monitor and minimize Donor Adverse Reactions in a tertiary care hospital Blood Centre

Experience of donor adverse reactions at Regional Blood Transfusion Centre

The best Abstracts selected for the oral presentations under Recipient Haemovigilance:-

Posterior Reversible Encephalopathy Syndrome (PRES)

Are we missing reverse-TRALI?

Delayed Hemolytic Transfusion Reaction with Compatible Blood– An Interesting Case Report

Is crossmatch compatible blood enough to prevent Hemolysis? Two eye-opening incidents reported at a tertiary care center in Eastern India

Study of Plateletpheresis Donor Hemovigilance and Materialovigilance in a Quaternary Care Centre in South India

Abstract Authors:-Deepti Sachan, Deepthi Krishna G, Kuralarasi Priyadarshini, Sheik Barith

Abstract Affiliation:-Dr. Rela Institute & Medical Centre, Chennai

Background Introduction
Apheresis procedures are usually safe and well-tolerated, donor adverse reactions (DARs) may occur during or after donation which might be localized or systemic. Adverse events (AEs) due to faulty kit or equipment or technique/ process may also happen and requires reporting, and corrective and preventive actions (CAPA).

Objectives
To study the incidence of DARs and AEs during plateletpheresis.

Methodology
A Retrospective study was conducted from May 2019 - October 2021. A total of 1758 Plateletpheresis procedures were performed after donor consent as per national guidelines on Amicus (Fresenius Kabi) (n=817), AmiCORE (Fresenius Kabi) (n= 695), and Optia Spectra cell separator (Terumo BCT) (n=246). Oral calcium was given to all donors prophylactically. All the plateletpheresis AEs were classified into DARs, Kit/equipment related, or technique/Process related. DARs were classified based on type of reaction (as localized or systemic reactions), donor demographics, timing of reaction, and risk factors were further analyzed.

Result:
A total of 70 DARs, all males, 54(77.1%) voluntary and 60(85.7%) first-time donors. 34 (4.1%) DARs noted on Amicus, 27 (3.88%) on AmiCORE, and 7 (2.8%) while using OPTIA SPECTRA. Maximum donors were in age group 26-30, Weight category 71-80. 39 (55.7%) DARs were seen in the first 30 minutes of donation, whereas only 4 (5.7%) DARs were after 60 minutes of donations. 27 were localized DARS (Hematoma 24, dual localized DARs – hematoma with allergic reaction in 2, bilateral hematoma 1). 39 were systemic DARs - 2 mild hypocalcemia reactions and 37 VVRs (33 mild, 3 moderate, and 1 severe). Combined DARs (hematoma with VVR) in 4 donors. One delayed DARs – Nerve irritation reported and recovered in 2 weeks. 51 (72.8%) DARs reinfusion could not be done. None of the donors needed hospitalization. Equipment/faulty Kit-related alarms or AEs were noted and required interventions. Each event was reviewed and CAPA was done. Technique/Process-related AEs included improper vein selection, faulty kit installation, Lipemic plasma alarms, Reactive results, etc.

Conclusion:
Meticulous donor vigilance, better personnel training, and supervision by transfusion medicine specialists will make donors` experience more pleasant. All DARs and AEs should be documented with CAPA and used for further process improvement.

Analysis of frequency and risk factors of vaso-vagal reaction in whole blood donors

Abstract Authors:-Radheshyam Meher, Gopal K Patidar, Rahul Chaurasia, Hem Chandra Pandey, Anzali Hazarika, Vidushi

Abstract Affiliation:-Department of Transfusion Medicine, All India Institute of Medical Sciences, New Delhi

Background Introduction
Even though blood donation is safe and non-harmful, some donors might experience such adverse reactions that they are discouraged from donating in the future. The vaso-vagal reaction (VVR) is a frequent donor adverse reaction experienced by whole blood donors. Certain risk factors for VVR have previously been discovered, however, these vary depending on the demographic or geographical conditions of the blood donor.

Objectives
To ascertain the frequency of vaso-vagal reactions in whole blood donors, as well as the risk factors for the same.

Methodology
A 6-month prospective observational study was carried out in a tertiary care institute in North India, from January 2021 to June 2021. During the study period, the frequency of VVR was measured in whole blood donors. The risk factors for this type of reaction were also looked at. For baseline variables, descriptive statistics were utilized. Univariate analysis was used to test independent variables, while multivariable logistic regression analysis was used to evaluate components that showed a connection with other variables.

Result:
In 4320 whole blood donors, we discovered 67 (1.55 percent) immediate-type VVR. The reaction rate was calculated to be 15 per 1000 blood donors. When compared to repeat donors, first-time donors face a threefold increase in risk. The risk of VVR decreases by 1.5 times with each decade of age from 18 to 65 years. Blood donors with a history of VVR in previous donations were shown to be 32 times more at risk. A 20mmHg difference in pre-and post-donation diastolic blood pressure (BP) was significantly associated with the probability of VVR. Other variables such as weight, occupation, collection volume, seasonal variation, sex, and pre-donation hemoglobin level were not shown to have a significant effect on the VVR rate in whole blood donors in our study.

Conclusion:
VVR is more likely in novice, young blood donors with a history of VVR and donors with a pre-and post-donation diastolic BP differential of 20mmHg. Pre-donation preventative methods such as water intake and applied muscle tension can help to limit the incidence of these types of adverse reactions in blood donors.

Effective implementation of 'Donor Safety Culture' strategies to monitor and minimize Donor Adverse Reactions in a tertiary care hospital Blood Centre

Abstract Authors:-Dr Lincy Jacob, Dr Akshata Parab, Jayashree Nawar, Manish Yadav

Abstract Affiliation:-Department of Transfusion Medicine & Blood Centre, Dr L H Hiranandani Hospital, Powai, Mumbai-76, Maharashtra

Background Introduction
Donor vigilance involves identifying, monitoring and preventing donor adverse events before, during and after the donation process, with a view to improve donor safety, donor satisfaction and encourage donor retention

Objectives
To adopt a preventive culture of donor vigilance, by developing strategies that promote donor safety in the Blood Centre. This approach help determine 'at risk' factors with the aim to reduce donor adverse events and ensure safe donation

Methodology
Donor Adverse Reactions (DARs) that occurred among whole blood (WB) donors at the Blood Centre, were evaluated from 1st January 2017 to 31st October 2021. At risk factors were identified and used as a predictive and preventive tool among WB donors, during and after donation. Donors were requested to inform if they experienced any delayed reactions. DARs reported were categorized as per the Hemovigilance Program of India (HvPI) reference document on type of complications.

Result:
During this study period, 10,430 WB donors donated at our Blood Centre. Of these, 7198 were camp donations and 3232 indoors. The total adverse events during this period were 43 (0.41%), with more DARs recorded in the first two years. A total of 33 DARs were observed between 2017-2018, with an incidence of 6.2/1000 WB donations. Among these DARs, about 57.5% were identified as at risk donors. Donor Safety Culture (DSC) strategies were implemented in 2019, which directly addressed predictive risk factors. A significant reduction to 6 DARs with incidence of 2.4/1000 WB donors was observed by end of 2019 and 4 DARs with incidence of 1.5/1000 WB donors by 2020-2021. Prevalence of Type B (vasovagal) DARs was 86%, while remaining 14% were Type A (hematoma/pain in arm).

Conclusion:
Promoting a multidimensional DSC in our Blood Centre, was the key to successfully reduce DARs among WB donors from 0.61% in 2017-2018 to 0.15% in 2020-2021. DSC involves the implementation of a set of preventive strategies that ensure donor safety during and post donation and include an informed, learning and reporting culture. With adequate planning, training and execution of DSC, Blood Centres can minimize adverse events and ensure a smooth donation process

Experience of donor adverse reactions at Regional Blood Transfusion Centre

Abstract Authors:-Dr. Abhay Jhaveri (M.B.B.S.), Dr. Sumit Bharadva (M.D.-IHBT)

Abstract Affiliation:-Surat Raktadan Kendra and Research Centre

Background Introduction
We analyzed the data during the period of December 2016 to October 2021 of donor vigilance at our centre

Objectives
To analyze the data reported and find ways to improve practices at our end

Methodology
We analyzed the data retrospectively for observational study

Result:
We collect blood from 100% voluntary donors. During the period, 131528 were male and 4107 were female donors. We found adverse reactions in 0.43% of overall donors. 0.39% of male donors and 1.61% of female donors experienced adverse reaction. 0.43% of whole blood donors and 0.46% apheresis donors had reactions. 0.66% of repeat donors and 0.32% of first time donors had reactions. Reactions occurred in 0.40% donors in outdoor camps and 0.62% during in-house collections. Vasovagal reactions were highest (96.03%) followed by delayed or re-bleeding (2.24%), hematoma (1.03%), painful arm (0.34%), citrate and other in 0.17% each. LOC occurred only in 7.93%. Injuries occurred in 1.90% donations. In 97.93% of cases, reactions occurred within facility while in 2.07% reactions occurred outside facility 1.03% data was captured after call back from donor. Donations were competed in 81.38% cases. 98.62% donors recovered onsite, 0.52% resolved on follow up, while in 0.86% of cases, donors were lost on follow up. Severity grade 1 reactions occurred in 99.66% while severity grade 2 occurred in 0.34% (n=2) cases. Single reaction was found in 571 donations, two reactions were found in 9 donations.

Conclusion:
0.43 % of overall donors had adverse reactions. Percentage of female donors experiencing reactions were four times higher compared to male donors. Reactions were found more (double) in repeat donors as compared to first time donors. Reactions were almost similar in whole blood and apheresis donors. Reactions were more during in-house collections compared to outdoor camps. Vasovagal reactions were seen in majority of cases followed by delayed or re-bleeding and hematoma. Majority of donors had single reaction. Reactions related to apheresis procedures were rare. Severity grade 1 reactions occurred in more than 99% cases. Severity grade 2 reactions were found in 2 cases only. No case of severity grade 3 or 4 was seen during the period.

Posterior Reversible Encephalopathy Syndrome (PRES)

Abstract Authors:-Preeti Budania, Saket Yadav, Madhu Mathur, Priya Marwah

Abstract Affiliation:-Department of Pediatrics, Mahatma Gandhi Hospital, Jaipur

Background Introduction
Posterior reversible encephalopathy syndrome (PRES) is a neurological syndrome associated with headache, altered mental status, seizures and visual disturbances and characterized by white matter vasogenic edema affecting predominantly the posterior occipital and parietal lobes of the brain. Neurological complications of blood transfusions are uncommon and blood transfusion related PRES is seldom reported in children.

Objectives
To Report a case of blood transfusion related PRES which is seldom reported in children.

Methodology
We report here one such case of PRES. A 7 year old boy with history of previous multiple transfusions for undiagnosed etiology presented with history of abdominal distension, pallor, yellow discolouration of skin and eyes, anorexia and lethargy.

Result

Management & Outcome: Detailed: work up revealed Hereditary Spherocytosis and splenectomy was advised. Post splenectomy, he received two units of packed cells. Post operative day 3, he developed headache, generalized tonic clonic seizures and altered sensorium. MRI brain showed occipital, cortical and sub cortical T2/FLAIR hyperintensities with minimal area of subarachnoid haemorrage with normal MR venogram consistent with PRES. We diagnosed the disorder as blood transfusion related PRES in a child with Hereditary Spherocytosis and managed with anti hypertensives and anti convulsants.

Conclusion:
PRES can be a major problem in rapid and massive blood transfusion. A high index of suspicion and prompt treatment can reduce morbidity, mortality and lead to early recovery.

Are we missing reverse-TRALI?

Abstract Authors:-Debapriya Basu, Suvro Sankha Dutta, Sabita Basu

Abstract Affiliation:-Clinical Associate, Junior Consultant, Senior Consultant - Department of Transfusion Medicine, Tata Medical Center, Kolkata

Background Introduction

Transfusion related acute lung injury (TRALI) is a rare but fatal transfusion reaction. Majority of the cases reported are after plasma or apheresis platelet transfusion caused by preformed anti-HLA antibodies present in the plasma. Here we report three cases of suspected reverse TRALI after granulocytes and haematopoetic stem cells (HSC) transfusions.

Objectives

Case series of suspected reverse TRALI

Methodology

Case 1:-

• A 7-year old female patient of acute leukemia was undergoing high-dose chemotherapy. She presented with fever with refractory neutropenia due to the invasive fungal infections. Buffy coat (BC) granulocytes were requested for her. After few minutes of start of transfusion, the patient developed hypotension, tachypnea, bilateral rhonchi and crepitations. Post-transfusion CXR showed bilateral infiltrates. She was shifted to ICU and recovered with supportive management; but later deteriorated and expired on the 7th day.

Case 2:-

• A 56-year male patient of MDS was planned for matched sibling donor HSCT. After receiving conditioning therapy he developed fever spikes, respiratory distress. On D-0 of transplant as he was clinically better, he received stem cells infusion. Two hours post infusion; he developed respiratory distress with hypotension and CXR showed bilateral infiltrates. His condition deteriorated and he expired on D+1 of transplant.

Case: – 3

• A 54-year old male patient, MDS, underwent haplo-matched HSCT. Intermittent cough and respiratory distress started on D+8 of transplantation requiring O2 support. Subsequently his sputum and blood came positive for candida infection and the CXR showed bilateral infiltrates. Six units BC were transfused on D+13 considering the infection as refractory. He deteriorated after 3 hours of transfusion and died on D+14.

Result

In all three cases the transfusion reactions are suggestive of reverse TRALI. The patients were transfusion dependent. So, they likely developed anti-HLA antibodies and the lung injury was probably implicated by the leucocyte antigens present in the donor units (granulocytes or stem cells).

Conclusion

Pulmonary complications following transfusion is not rare in an oncology centre where granulocytes are transfused to control infection and patients are already multi-transfused and have risk factors for ARDS. Stem cell infusion may also cause reverse TRALI as they are leucocyte rich. In addition, inclusion of stem cell products in the scope of Haemovigilance should be considered.

Delayed Hemolytic Transfusion Reaction with Compatible Blood– An Interesting Case Report

Abstract Authors:-Singh Deeksha*, Pahuja Sangeeta, Sharma Geetika, Vilash Ram

Abstract Affiliation:-Department of Immunohematology & Blood Transfusion, Lady Hardinge Medical College & associated hospitals, New Delhi 110001

Background Introduction
A Delayed Hemolytic Transfusion Reaction (DHTR) usually manifests between > 24 hours to 28 days after blood transfusion. Signs and symptoms include inadequate rise or unexplained fall in hemoglobin level after blood transfusion along with clinical or laboratory features of hemolysis.

Objectives
To investigate a case of suspected delayed hemolytic transfusion reaction.

Methodology
An 11 years old male child, known case of aplastic anemia was transfused with one unit red cell concentrate (RCC). Pre-transfusion hemoglobin was 6.4g/dL. Next day patient developed fever and high colored urine. Post-transfusion hemoglobin level showed inadequate increment (6.9g/dL) and mild hyperbilirubinemia (2.8mg/dL) suggestive of hemolysis. Post-transfusion blood sample of the patient was sent to our Blood Centre for transfusion reaction work-up. Patient's pre-transfusion sample and segment of transfused RCC were retrieved.

Result
Blood group of the patient's pre-transfusion as well as post-transfusion samples and that of the transfused RCC was B Rh positive. The transfused unit was Coombs cross-match compatible with both the blood samples. Direct antiglobulin test of post-transfusion sample was negative. However, indirect antiglobulin test (IAT) of pre-transfusion sample was positive using commercially available 3-cell panel. Further, 11-cell panel was put up and was suggestive of anti-E alloantibody. Rh/Kell antigen typing of patient's red cells was c-negative & E-negative. Upon comprehensive immunohematological analysis, it was found that the transfused unit was c-positive & E-negative. In view of this, IAT was re-performed on post-transfusion sample which was suggestive of anti-c+anti-E alloantibodies. Using c+E- and c+E- select cells, both anti-c and anti-E alloantibodies were confirmed.

Conclusion
Exposure with 'c' positive red cells led to Anamnestic Reaction and re-appearance of anti-c alloantibody and hence DHTR in the patient. This case highlights that even crossmatch compatible blood transfusion may lead to hemolytic transfusion reaction. Also, it emphasizes the importance of transfusing phenotyped matched red cells and performing antibody screening particularly in multi-transfused patients.

Is crossmatch compatible blood enough to prevent Hemolysis? Two eye-opening incidents reported at a tertiary care center in Eastern India

Abstract Authors:-Datta N, Mukherjee S, Prakash S, Sahu A, Das N, Bose A

Abstract Affiliation:-Department of Transfusion Medicine and Blood Bank, AIIMS Bhubaneswar

Background Introduction

We share our experience of two patients have hemolytic reaction after receiving AHG crossmatch compatible blood.The first patient a G2P1 31y/F received one unit PRBC with baseline Hb 10.1g/dL.She complained of cola-coloured urine 4 hours after stating transfusion.She gave history of back pain and had low BP and raised HR and decreased urine output.Her post-reaction Hb was 8.8g/dL.The second patient,24y/F thalassemia patient with Anti-E alloimmunisation and received two fresh leukodepleted Rh/K matched AHG crossmatch compatible units and reported no immediate adverse effects.She reported 10 days later with high coloured urine and non increasing Hb(5.3g/dL).She was admitted for RFT monitoring and started on hydration.

Objectives

To investigate the possible causes of hemolysis in both patients

Methodology

In the first case,there was no ABO/Rh(D) mismatch,no thermal,mechanical,chemical causes of hemolysis.The transfusion workup revealed Anti-Jk(b) in the serum which was not detected on crossmatching because the unit was both Jk(a+) and Jk(b+).The post reaction DAT was 3+ for C3d and pre reaction DAT was negative.In the second patient,the post-reaction sample revealed anti-E along with some antibody with unknown specificity. DAT 4+ for IgG 1+ and C3d 2+.Pre transfusion sample was documented as having Anti-E with DAT negative.Random AHG crossmatch with Rh/K matched units were 1+ to 2+ incompatible in some units and compatible in others.Investigations revealed elevated LDH,decreased reticulocyte count,bilirubin elevated,serum electrolytes were normal.

Result

The first patient was counselled and given a report. She required no further transfusion support and was discharged safely.The second patient we counselled to not delay reporting of adverse effects and to receive transfusion under hospitalisation.The patient improved with hydration and compatible units were issued to patient under risk consent and the patient was transfused slowly with monitoring till her Hb reached 8.4 g/dL.

Conclusion

From our experience in the first case we would like to advocate for Indirect Coomb's Test or antibody screening of all pregnant females. Our inference from the second case is any transfusion can be potentially hemolytic so taking proper consent before transfusion is must.We would like to suggest immunohematological reference centers for transfusion of these chronic anemia cases.The availability of an Indian antibody screen and ID panels can give us a better idea about the antibody which maybe missed with imported panels.

OTHER ABSTRACTS SUBMITTED BY THE PARTICIPANTS

Dengue induced hemolytic anemia? Autoimmune hemolytic anemia? and thrombocytopenia

Abstract Author(s):-Dr Prerna mohan

Affiliation:-Apollo Hospitals, Bilaspur

Background/ Introduction

75 year old male was admitted in EMR with giddiness, weakness and evaluation of decreasing trend of Hb and low platelet count.
On admission, patient was afebrile, with Hb of 5.2 gm/dl, TLC 15,400/cumm , ESR 140 ,platelet count of only 5000/cumm. Retics were 3%.serum bilirubin was 2.3 gm/dl, with direct bilirubin being 1.3mg/dl and indirect 1.0 mg/dl. USG showed mild hepatomegaly ,splenomegaly and renal cyst.C3 complement level was normal.

AIM/ Objectives

To find out the cause for thrombocytopenia in a 75 year old man

Methodology

History---of covid vaccination in the month of April 2021, LDH—818, Vit B12—89,ANA—0.6 and blood group was O positive. Dengue NS1 was Non reactive and IGg—reactive.
Bone marrow revealed Normoblastic, erythroid hyperplasia.

Result

Blood centre—when request received, blood group O positive, reaction with anti-H positive,DCT and ICT positive and cross matches incompatible.
After repeated cross matching of O positive units, we ultimately ended up with transfusion of 3 PRC, 8 RDP and 1 SDP.
Medication—Inj, depotex , Inj Nervigen, IN pantocid, Inj Zofer,

Conclusion

Discharge—patient was finally discharged in fit condition after 4 days , with Hb of 7.6gm/dl, TLC 7300 and platelet count of 50,000 tab wysolone for a short duration.

ANALYSIS OF ADVERSE TRANSFUSION REACTION IN A TERTIARY CARE HOSPITAL SOUTH INDIA, A RETROSPECTIVE ANALYTIC STUDY

Abstract Author(s):- DR DIBYAJYOTI SAHOO

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Background/ Introduction

Blood transfusion is a life-saving medical intervention, which possesses a potential risk of acute/delayed transfusion reactions and transfusion transmitted infection for the recipient. Having knowledge of various transfusion reactions helps not only in their early identification and treatment but also it guide us to prevent its occurrence by taking precautionary and adequate measures.

AIM/ Objectives

The aim of this study was to estimate the incidence and analyse pattern of transfusion-related adverse events in this part of the world.

Methodology

The present retrospective observational study was conducted in the Department of Transfusion Medicine at a tertiary care centre in south India. All the Adverse transfusion reactions were investigated in detail in the blood bank for the clerical errors, immunohematology workup and classified according to their nature with imputability assessment.

Result

A total of 66221 units of components were issued to various departments in the hospital. Total 84 transfusion reactions were reported to the blood bank following transfusion of components only (0.13%). The most common type of transfusion reaction among all the reactions was febrile nonhemolytic transfusion reaction (38%), followed by allergic (33%). Fever, chills and rigors (23%) were the most common symptom noticed in ATR followed by dyspnoea (16%), rashes (11%) and tachycardia (9.6%). Red cell concentrate (RCC) transfusions (76%) contribute to majority of reactions followed by Platelet concentrate.

Conclusion

Transfusion reaction incidences can be less with practices like appropriate donor selection, use of buffy coat removal method for component preparation, usage of leukoreduction filters for required cases, use of gel card technology for compatibility testing, antibody screening, strict bed side patient monitoring etc. Creating awareness regarding blood components and risk factors for various reactions, implementation of programme for rational use of blood, developing appropriate institutional guidelines, improving storage conditions appropriate transfusion reaction reporting format helps in using blood components safely. Hospital transfusion committee can play an important role in this aspect.

Project "SANRAKSHAN" Monitoring Night Time vs Day Time Blood Transfusion Practice

Abstract Author(s):-DR.ABHINAV VERMA

Affiliation:-SENIOR CONSULTANT AND HEAD - DEPARTMENT OF TRANSFUSION MEDICINE,MAX SUPER SPECIALITY HOSPITAL VAISHALI

Background/ Introduction

Patient blood management is a multidisciplinary approach to improve patient outcomes using evidence based strategies in patients who may need transfusion. The goal is not only to improve outcomes by transfusing blood appropriately, but also to introduce strategies to prevent unnecessary transfusion reactions.
Non-urgent 'out of hours' requests should be avoided wherever possible as worldwide data clearly shows an increased risk of errors leading to transfusion reactions.
In the month of July blood components transfused were 63% from 8AM TO 8PM and 37% from 8PM TO 8AM. 5 Transfusion reactions occurred in the month of July out off 1145 blood component transfusions leading to 0.44% all occuring in night after 8pm.

AIM/ Objectives

The main aim of this study is to determine right time to transfuse routine blood components leading to safe blood transfusion practice

Methodology

We re-evaluated all routine blood transfusions and blood transfusion reactions between July 2021 to September 2021(3 months) at the Department of Transfusion Medicine.
The physicians and nurses monitored the patients for the occurrence of any blood transfusion reaction and reported the results of all transfusions regardless of whether an adverse blood transfusion occurred via standard blood transfusion reaction form.

Result

Since the project was launchd in july 2021 routine night blood transfusions have decreased from 37% in July to 2.7% in September.
Blood transfusion reactions have decreased from 0.44%in July to 0.19% in September
In our study we found that number of transfusion reactions occurring in night were brought down to more than half in september 2021 as compared to transfusions reactions occuring in July 2021.
We found that there was reduced staffing for blood administration and monitoring in
night compared to daytime. Additionally we found that patients receiving the transfusions in the night are prevented from sleeping and are thus disturbed throughout the night.

Conclusion

Thus we concluded that night requests for transfusions for overnight administration of blood components should be avoided wherever possible because of an increased risk of transfusion reactions.
As a part of good transfusion practice, transfusions should not be given at night unless the patient is actively bleeding or has some other urgent clinical need.
Hospital staff should be educated that inappropriate overnight transfusions compromises patients' care and causes increase risk of transfusion reactions.

Project “RAKSHA” Ensuring safety in blood transfusion practice

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Background/ Introduction

Collection of a properly labelled pre-transfusion blood sample from the intended recipient is critical to safe blood transfusion.
Misidentification of recipients or pre-transfusion sample labelling errors may result in Wrong Blood In Tube(WBIT), a situation where the blood in the tube is not that of the recipient identified or the sample label.
Clerical and human errors involving patient, sample and blood unit identification are the most common causes of mis-transfusion leading to Acute Hemolytic Transfusion Reactions with higher morbidity and mortality.

AIM/ Objectives

The main aim of this study is to see the impact and efficacy of using Haemovigil, a bedside transfusion safety system designed for patient identification to prevent errors in the transfusion process.

Methodology

The study was conducted at the Department of Transfusion Medicine over a period of 12months from OCT 2020 to SEP 2021.All the patients requiring blood transfusions were provided with Haemovigil wristbands as a part of the project. Haemovigil program comprises of: Wristbands - consist of a unique 6-digit number and 4 peel-off labels with encrypted codes to be affixed on specimen tubes. Software - Which decrypts the code from the peel-off labels on specimen tubes and generates the same 6-digit number as on the wristband. Digital Transporter - An insulated reusable box with a digital lock to carry blood units, which can be locked by entering the unique 6-digit number generated by the software and opened only by the same number also present on the Hemovigil Wristbands

Result

After implementing Haemovigil out of 8,945 samples received 71 samples were improperly labeled (0.79%) and 4 were Wrong Blood In Tube (WBIT) (0.05%).
In our study Haemovigil system was able to bring down sampling errors to 1(0.1%) from 71(0.79%) and WBIT (Wrong Blood In Tube) to 0% from 4(0.05%).
Since the patients name and encrypted label affixed on the specimen tube should match perfectly before releasing the reserved blood component units the Haemovigil system ensures that a final pre-transfusion identity check is carried out and wrong unit of blood and sample cannot be accessed.

Conclusion

Haemovigil system is a cost effective and easy method that makes use of a combination of a hardware and software to ensure a final and repeat check of patient identification before blood transfusion without hampering the workflow.

Besides this there was 40% reduction in transfusion reactions>93% improvement in use of blood components.

Importance Of HemovigilTM System For Patient Identity & Safe Blood Transfusion

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Affiliation:-KMMMT Sahyadri Speciality Hospital Blood Centre

Background/ Introduction

Haemovigilance is derived from the Greek word `hema` means blood and Latin word vigilance means keeping vigilance on post transfusion problems.
Blood is categorized as drug as per the drug and cosmetics act an integral part of critical patient care though life saving occasionally it can result in spectrum of adverse event.

AIM/ Objectives

Haemovigilance is essential for identification and prevention of transfusion reaction an improved technique for patient Identity & safety.

Methodology

Investigation of adverse event related to blood transfusion data was considered. Since 2016 management made compulsion for Hemovigil wrist band & System for every transfusion safety. There are various modes of haemovigilance protocol e.g
1. Patient identity wrist band.
2. Post transfusion feed back form.
3. Post transfusion reaction work up.

In addition to above aids we have introduced hemovigil wrist band and boxes as additional precautionary measure for delivery of right blood to right patient.
Which includes:-
1. Wristband to all patients one who needs blood transfusion .
2. From wrist band one label is peeled and attached to samples being sent to the blood bank.
3. Scanning of barcoded label is done.
4. Hemovigil box is locked with digital key.
5. The hemovigil box is opened in the ward by entering the wristband code.

Result

Since inception of Hemovigil system 49,561 were Red cell concentrate transfused.The incidence of post transfusion reaction was seen only in 0.01% patient these units sterility test revealed the reaction event were febrile non hemolytic transfusion reaction, purities and rigour/chills due to patient's hypersensitivity.
A near missed incidence took place (Patient was A1B Rh Positive & blood that was issued was B Rh Positive) though a safe blood to be transfused to the patient as per transfusion policy (It was labeled as wrong blood issued to the patient). Hence hemovigil boxes were made mandatory.
If patients with similar names are admitted wrong transfusion will not as digital lock will open only with the wristband code of the said patient. This will avoid undue event of wrong transfusion.

Conclusion

Transfusion done only with hemovigil box will not only be a safe transfusion practice but it will also be a boon to field of transfusion medicine and humanity as one will be medico legally safe because no patient will be wrongly transfused.

ALLERGIC TRANSFUSION REACTIONS – A COMMON BUT AN OVERLOOKED ADVERSE EVENT

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Background/ Introduction

Non-haemolytic transfusion reactions are the most common type of transfusion reaction which include allergic reactions. The allergic reaction may be mild involving urticaria or rashes to severe causing bronchospasms and anaphylaxis. The allergens that cause allergic transfusion reactions are plasma proteins such as IgA and haptoglobin. Biological response modifiers such as inflammatory cytokines which accumulate in blood components during storage can also result in allergic reactions. However, the causative relationship between the event and the transfusion remains obscure in many patients.

AIM/ Objectives

To analyse allergic transfusion reactions reported in our centre and the blood component implicated in the event.

Methodology

The study was conducted in our super speciality hospital in patients transfused with blood components undergoing cardio thoracic and neurosurgeries from January 2020 to October 2021.

Result

The total number of blood components transfused during the period was 19320. The total number of transfusion reactions was 49 of which 28 were related to allergic reactions (57%). Rashes was the most common symptom and there were more number of males (23) compared to females (5) in patients who had allergic reaction. The allergic reactions were seen in 50-60 years of age (9) and more than 60 years age (7) group. Fresh frozen plasma (FFP) transfusions (18) resulted in more allergic reactions compared to red cell units (10) and none due to platelet transfusions. Three of the red cell units transfused were leucoreduced while the remaining five were non leucoreduced RBC units. The average age of the red cell units implicated in allergic reactions was 9 days. Among the 28 allergic reactions, 24 were related to only allergic symptoms, three were anaphylactic reactions and one where the patient exhibited both febrile and allergic symptoms. All of the allergic reactions were grade 1 and had minor symptoms which resolved. Two of the anaphylactic reactions were grade 2 severe event while the other one was a grade 3 life threatening reaction that required urgent intubation. The imputability levels for all the allergic reactions were definite.

Conclusion

Our study revealed male gender, older patients, FFP transfusions were more associated with allergic transfusion reactions and seen in both leucoreduced and non leucoreduced RBC units. Characterization of allergic symptoms and the blood component involved are necessary for accurate identification and management of allergic reactions.

RECOMMENDATIONS FOR SUCCESSFUL HAEMOVIGILANCE PROGRAMME OF INDIA

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Background/ Introduction
India has had a haemovigilance program in place since 2012. While this initiative has brought around its fair share of improvements in the field of blood transfusion services in India, there is still a lot of room for improvement. This study aims at analyzing a few key indicators of this programme, to understand the areas of progress as well as to delineate the factors that need improvement

AIM/ Objectives
The objective of the study is to recognize the strategy that India should develop

Methodology
A SWOT analysis of the HvPI was done based on the review of literature and the results of the field surveys conducted on impact & implementation of haemovigilance on blood centres

Result
The results regarding with the study on the functioning and status of implementation of haemovigilance programme of India in the blood banks of southern Kerala revealed that all the 40 blood centres subjected to the study were licensed for handling whole blood. 23 blood banks were licensed for handling blood components. 6 blood banks process 100% blood into components. Majority of blood banks have excellent demand for components. Packed red cells, Platelet concentrate, Fresh frozen plasma were the significant components among the prepared components. Majority of the blood banks under survey had hospital transfusion committee (HTC). 25 blood banks replied as the Haemovigilance programme of India (HvPI) is an excellent/good system. However Only 11 blood banks were enrolled in the HvPI. Training programmes for the resident doctors and nurses regarding with adverse transfusion reaction and their reporting were not conducted by 17 blood banks.
A SWOT analysis of the HvPI was conducted based on the review of literature and the results of the surveys conducted and recommendations are made for the successful Haemovigilance programme of India

Conclusion
Each hospital performing blood transfusion should have a fully functional Hospital Transfusion Committee. There is a need to strengthen systems for assessment, surveillance and vigilance in blood transfusion. This would require data to be collected using standardized tools from blood centres, hospital blood banks and hospitals practicing transfusion at provincial/regional and district levels to ensure national coverage, quality data. Recommendations are derived based on surveys as well as SWOT analysis on HVPI.

A study of the incidence of adverse transfusion reactions in a tertiary care centre in North East India

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Background/ Introduction
Hemovigilance is the systematic surveillance of adverse transfusion reactions. This system improves the safety & quality of Blood Transfusion Services.

AIM/ Objectives
The study was undertaken to analyze the incidence of adverse transfusion reactions to blood and blood components issued & reported to our Blood Centre.

Methodology
A retrospective analysis was done on the adverse transfusion reactions reported to our centre during the period from January 2016 to December 2020. All the reactions were reported in Transfusion Reaction reporting form (TRRF) for utilization of blood and blood products prepared as per the Hemovigilance Programme of India guidelines. Transfusion reaction workups were performed on all the transfusion reactions reported. The analysis was performed in respect to age, gender, type of reaction, the components implicated & in relation to previous transfusions received.

Result
A total of 51,329 transfusions of blood and its components were done out of which 92 (0.18%) transfusion reactions were reported. Males (52.1%) had a slight preponderance over females (47.9%) in having adverse transfusion reactions. In terms of blood components, maximum reactions were observed with Packed Red Blood Cells (53.2%) followed by Fresh Frozen Plasma (26%) and Platelet Concentrate (20.8%). Patients with repeat transfusions had more reactions (66.3%) in comparison to first time recipients (33.7%). The most common type of reaction that was observed was allergic (47.8%) followed by FNHTR (29.3%), bacterial sepsis (14.1%), TRALI (5.4%), TACO(2.17%) and hypotensive episode (1.08%) respectively. Majority of the reactions were observed in the adults (79.6 %) as compared to the pediatric age group (20.4 %).

Conclusion
The incidence of adverse transfusion reactions in our study is found to be (0.18%). Allergic reactions accounted for the majority of the reactions with Packed Red Cell being the major implicated component. Strict vigil on every aspect, i.e. proper collection methods, proper storage, rational use of blood, proper transfusion practices, etc will ultimately be beneficial in further reducing the incidence of adverse transfusion reactions.

Recipient hemovigilance: Improvising quality and safety of blood transfusion in multi transfused oncology patients.

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Background/ Introduction

Transfusion of blood products has many clinical risks causing adverse reactions. Proactive role of transfusion centers for supplying safe blood components, monitoring of quality indicators, providing education, developing guidelines and auditing practice and sharing experience would minimize adverse reactions, improve patient care and cause improvement in transfusion safety.

AIM/ Objectives

The purpose of this study is to assess recipient hemovigilance by noting the occurrence of Blood Transfusion Reactions (BTR) in multi-transfused oncology patients and its use as quality improvement tool

Methodology

All blood donations were subjected to ABO Rh grouping, Antibody screening and Rhesus phenotyping by Solid Phase Red Cell Adherence method and universal leucodepletion. All oncology patients were issued Rh phenotype matched Packed Red Blood Cell. All stakeholders involved in transfusion chain were educated with best transfusion practices.

Result

Over three years' study period, a total of 20449 blood components were issued. During this period, only two recipients showed transfusion reaction both by Fresh Frozen Plasma (0.0097%). Both adverse reactions occurred in year 2019; 0.026% incidence for 2019 and no adverse reaction reported in years 2018 and 2020 (zero % incidence).

Conclusion

Two main elements for safe and effective transfusion are sufficient supply of safe blood and good clinical practice. Preventing transfusion reactions by various important measures, following-up reactions, reporting and implementation of quality indicator- based hemovigilance will lead to improvement in better patient care, patient blood management, long term savings and increased productivity which can be achieved by proactive role of transfusion centers in promoting good transfusion practice.

BILATERAL RENAL INFARCTION AND NUTCRACKER SYNDROME-A UNIQUE CASE REPORT

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Background/ Introduction

Bilateral renal infarction is a rare diagnosis and is often overlooked and under diagnosed. The most common presenting symptoms include loin, flank, or abdominal pain with nausea and/or vomiting. Urinalysis often demonstrates micro hematuria with proteinuria.Nutcracker syndrome (NCS) is a condition that occurs when the left renal vein (the vein that carries blood purified by the left kidney) becomes compressed. . Treatment ranges from surveilance to various types of surgery.

AIM/ Objectives

The objective of this case report is to raise the awareness in clinicians to consider the diagnosis of renal infarction in patients with inexplicable abdominal or flank pain even without any risk factors for the disease.

Methodology

observational case report

Result

A 22 year old female presented with history of burning micturition since one month, fever with chills and abdominal pain for the past ten days. On admission patient had complaints of bilateral flank pain more on right side and burning micturition. Her BMI was 18.6 kg/m2. Lab report showed leucocytosis ,creatinine 0.7 mg/dl. A urine analysis showed infection with no hematuria. Urine culture grown E.coli->10 5 CFU/ML and started on antibiotics according to sensitivity. Even after antibiotics, proper hydration and pain control measures, patient did not have much releif of her abdominal pain. Hence CECT ABDOMEN performed, which showed bilateral renal infarcts. Hypercoagulation workup was normal. CT angiogram showed NUT CRACKER SYNDROME.She was started on anti coagulation, and a diagnosis of idiopathic bilateral renal infarction with nut cracker syndrome was made.

Conclusion

Renal infarction is relatively rare. The main cause of renal infarction is cardioembolic event in patients with atrial fibrillation, but in half of cases there is no known cause.Nearly 20% of renal infarctions are bilateral, and these have been reported in cases of dissecting aortic aneurysm, septic emboli in patients with endocarditis, lupus, vasculitis, sickle cell disease, fibromuscular dysplasia of renal arteries, secondary to non-steroidal anti-inflammatory drugs, and due to suspension of anti coagulation.

In our case, the patient was a young thin female without any co-morbidities and risk factors.We might have missed the diagnosis if not evaluated completely. The abdominal pain could have been due to both renal infarction and nut cracker syndrome in this patient. This approach will help in prompt diagnosis and early treatment initiation.

Impact of Immune Thrombocytopenia Purpura on human health

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Background/ Introduction

The term “Purpura” Originated from Greek word Porphyry, a Mediterranean Molwse, which yields purple dye. ITP is also called Werlhofs disease, it refers to Paul Gottlieb werlhof, he is a personal physician to king of Hanover, where he described a case of 16 yr old girl who developed bleeding of skin and mucous membranes after an infection. ITP is not an hereditary disease. ITP is more common in females, especially during pregnancy. ITP is isolated by Thrombocytopenia, which means platelet count i.e., <150,000 u/l.

AIM/ Objectives

To through some light on Immune Thrombocytopenia Purpura and its effect on human health

Methodology

- Diagnosed - if it last < 3 months
- Persistent - if lasts 3 – 12 months
- Chronic - beyond 12 months

? ITP occurs when certain immune system cells produce antibodies against platelets.
? Acute ITP is most commonly seen in young children (2 – 6 yrs old).
? Acute ITP has very sudden onset and symptoms disappear in less than 6 months, sometimes within a few weeks.
? We can’t prevent this ITP, but we can prevent the complications of ITP.
? The Examples of medicine of ITP include.

- Aspirin
- Ibuprofen

? Symptoms include :

- Excessive bruising
- Bleeding from gums / nose
- Heavy menstrual flow
- Blood in urine / stools

Result

According to recent studies, COVID-19 patients often have mild thrombocytopenia, because of this they have increased platelet count.
Patients suffering from this ITP – They should have 2 kiwis / day, this fruit is also useful for those who are suffering from Anemia, vitamin B deficiency.
The incidence of ITP among adults in the USA is estimated that 3.3 per 1,00,000 adults / year are affected.
Worldwide it is estimated that there are more than 2,00,000 people were affected by ITP.
ITP can occur at any age staring from 3 months to over 100 years.

There are some organizations which update information about ITP. Some of them are

- NORD member Organisation
- European society for Immune deficiencies
- GARD (Genetic and Rare diseases information center)

Conclusion

Thus Immune Thrombocytopenia Purpura has a huge effect on human health. So proper attention is to be given to this disease for understanding the measures to be taken to avoid or cure this ailment. Petechiae due to minor bleeding from tiny blood vessels (capillaries) in the skin, Purpura which is Purplish splotches, appear like bruises may not appear serious but issues like nasal bleeding, heavy menstrual blood loss bleeding in the mouth, and restlessness are considered to be very dangerous.

Evaluation of transfusion feedbacks and implementation of safety interventions to improve bedside transfusion practices.

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Background/ Introduction

Blood transfusion process includes a series of events from ordering the blood, transportation, administering, monitoring, and documenting the transfusion, and adverse events if any. However, the bedside transfusion practice of documentation is inadequate in developing countries. This study highlights the need for monitoring bedside transfusion practices and their documentation and implementing quality interventions

AIM/ Objectives

To assess the bedside transfusion practices by reviewing transfusion feedback forms.

Methodology

This is a prospective, observational study conducted in the department of Transfusion medicine from Jan 2020 to Oct 2021 for 20 months. For each blood transfusion episode, a transfusion feedback form (a carbon copy of the transfusion monitoring record) at the completion of transfusion within 24 hours was received. All the transfusion feedbacks were analyzed for TATs(turnaround time)
TAT1: time from receiving issue slip in the blood centre to issue of the reserved blood component
TAT2: Time from issue of blood component to start of blood transfusion (30 min Rule)
TAT3: Time from start to end of blood transfusion. (Maximum 4 hours from issue). Apart from these, adverse transfusion reactions (ATRs) were also analyzed.

Result

During the study period, 12710 transfusion episodes,a total of 10765 (84.7%) transfusion feedback forms were received ; 94.7% (n=2964) from OT and 82.6% (n=7819) from wards/ICUs. TAT 1 for reserved blood components,LDPRC shows an average of 4.2 min(3.2 to 5.5 min), FFP- 28.7 min(20 min to 34 min), Platelets- 6.6 min(3 min to 13.38 min) and 30 min (18 min to 35 min) for Cryo issue. TAT2 showed an average of 22.3min (4-43min) for all the transfusion episodes and TAT3 was 2 hr 10 min (1 hr 26 min to 4 hr 40 min) for LDPRC transfusion. 3.78% (n=296) showed delay in transfusion and 1.18%(n=93) showed extended transfusion. A total of 37 (0.19%) transfusion reactions has been recorded for 19,580 blood components transfused. FNHTR account for 43.24% (n=16) ; allergic reactions 40.5% (n=15), 8.18%(n=3) TRALI and 2.7% (n=1) each of TACO, hypotensive and nonimmune hemolytic transfusion reactions.

Conclusion

It is important to ensure safe Bedside transfusion practices by following the national guidelines and implementing Hemovigilance by appropriate monitoring, documentation, regular audits, staff training, etc. Apart from ATRs, it is important to monitor each transfusion in detail which will help to improve transfusion practices by timely quality interventions.

Time to Objectify and Mandate a Dedicated Manpower for Haemovigilance

Abstract Author(s):-Dr. Yashaswi Dhiman1, Dr. Manish Raturi 2, Dr. Anuradha Kusum 3.

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Background/ Introduction
By 2016, 475 blood centres had enrolled in Haemovigilance Program of India (HvPI) with the objective to monitor adverse transfusion reactions, facilitated by uplinking the reported reactions to online HvPI software. This requires an additional effort by existing manpower that is already a handful and may offer a leeway if not mandated.

AIM/ Objectives
The primary aim of the study was to analyze the adverse transfusion reactions reported at our centre, both uplinked and not-uplinked to HvPI software. A secondary aim was to reanalyze the discrepancies in diagnosis and imputabilities of the uplinked reactions.

Methodology
This retrospective observational analysis was done from May 2016 to October 2021 in the Department of Immunohematology and Blood Transfusion in a tertiary healthcare centre in North India. Two groups were formed, Group I constituted the adverse reactions that were reported and uplinked through TRRF version 2 in the Haemo-Vigil Software of HvPI, and Group II constituted reactions in Group I and those that were reported but not-uplinked to the software. Group 1 reactions were also reanalyzed based on reported symptoms, blood components, and investigations for subjective discrepancy in diagnosis and imputability. Data were analyzed using online statistical software MedCalc using the "Exact Poissons Method" and the Chi- squared test with a significant p-value of <0.05.

Result
A rising trend in reporting and uplinking of reactions was observed during the course of the study period. A total of 171 reactions were reported in 166 patients and 91 were uplinked, with an incident rate of 1 in 1381 and 1 in 735 in Group I and Group II respectively. The difference was statistically significant ($p<0.0001$). The implication rates of blood components to transfusion reactions differed significantly with PRBC's at the rate of 1 in 879 in group I and 1 in 455 in Group II ($p<0.001$). Allergic reactions were the most common type in both groups. A discrepancy of 13.1% and 23.3% in diagnosis and imputability respectively was observed.

Conclusion
The difference in incidence rates in reported, uplinked, and reported, not-uplinked transfusion reactions indicates a mandate for dedicated personnel to uplink and report the transfusion reactions to HvPI for accurate analysis at the National level. Discrepancies in the diagnosis of transfusion reactions and their imputabilities indicate an urgent need for a case-based approach for awareness campaigns and objectification of imputability by scoring systems respectively.

Importance of Hospital Transfusion Committee in Recipient Haemovigilance

Abstract Author(s):-Dr. Abhay Jhaveri (M.B.B.S.), Dr. Sumit Bharadva (M.D.-IHBT)

Affiliation:-Surat Raktadan Kendra and Research Centre

Background/ Introduction
We are Standalone Regional Blood Transfusion Center. After analyzing the data from December 2016 to October 2021 of recipient hemovigilance we feel that hospital transfusion committees are not effective

AIM/ Objectives
To evaluate reporting of transfusion reactions and find ways to improve practices at clinician end

Methodology
We analyzed the data retrospectively for observational study

Result
We issued 152947 units of blood/components during the period out of which untoward reaction occurred in 82 cases (0.05%). Time from issue to transfusion was more than an hour in 35 cases; maximum was 13 hours. Non immune hemolysis, immune hemolysis due mislabelling of sample at bedside were observed. 50% of returned monitoring sheets are. Being standalone blood centre, we face many difficulties: Patients are not monitored for initial 30 minutes. All details are often not filled in Blood Transfusion Reaction Notification form, blood and urine samples are not sent, and pre-transfusion lab investigation reports are not provided. Volume transfused, outcome, date and time of recovery are not provided. Admission number is not provided. Blood bag is not sent, transfusion was first time or repeat is not mentioned, pre-transfusion and post reaction vitals are not provided. Indication for transfusion, diagnosis, patient's age and gender, reaction date and time, signs and symptoms of reaction, whether under anaesthesia or not etc. are not provided. Clinicians find it difficult to spare time to attend CMEs.

Conclusion
Clinicians must be involved in recipient haemovigilance program by regulatory bodies. Regular training of paramedical staff must be arranged. At any cost preventable must be avoided. Hospital transfusion committees must be active in true spirit and not just on paper. Staff must be instructed to transfuse the unit as early as possible once it reaches at hospital. CME of short duration must be arranged for clinicians.

Experience of standalone blood centre on recipient hemovigilance by retrospective analysis of last five years data

Abstract Author(s):-Dr. Abhay Jhaveri (M.B.B.S.), Dr. Sumit Bharadva (M.D.-IHBT)

Affiliation:-Surat Raktadan Kendra and Research Centre

Background/ Introduction

We are Standalone Regional Blood Transfusion Centre. We analyzed the data from December 2016 to October 2021 of recipient hemovigilance of our centre

AIM/ Objectives

To analyze the data reported and find ways to improve reporting from our blood centre and try to reduce transfusion reactions

Methodology

We analyzed the data retrospectively for observational study

Result

Untoward reaction occurred in 82 cases (0.05%). Types of reactions reported were as under: FNHTR 41.46%, allergic 28.05%, TAD 7.32%, TACO 6.10%, immune hemolysis due to other allo-antibodies 3.66%, Hypotensive BTR 2.44%, Anaphylaxis2.44%, non-immune hemolysis 1.22%, , immune hemolysis due to ABO incompatibility 1.22%, pain at infusion site, other 1.22%. All reactions were immediate. 80 cases recovered while outcome was unknown in 2 cases. Components involved were WB 0.34%, SDP 0.22%, PRBC (0.09%, SW-PRBC and Cryo 0.03%, LR-PRBC and FFP 0.02% each. No reactions occurred in RDP and CCP. FNHTR and allergic reactions were common where expiry date was <7 days at the time of transfusion. Recovery time was highest (2 days) in case of hemolytic reactions followed by TACO and TAD. 9 transfusions were given within 24 hours in case of polytrauma. Out of sterility of 22 blood bags done, two were found positive for bacteria but they were kept at room temperature (open system) in ward and sent to our centre after more than 9 hours. No signs or symptoms of infection were found in recipients. In six cases, more than one reactions were found, FNHTR, TAD and TACO in 1 cases, FNHTR and TACO in 2 cases, FNHTR and TAD in 1 cases, FNHTR and allergy in 1 case, Hypotension, Bradycardia and respiratory arrest in 1 case.

Conclusion

FNHTR are commonest of all reactions followed by allergic, TAD, TACO, immune hemolysis due to other allo-antibodies, hypotensive BTR and anaphylaxis, immune hemolysis due to ABO incompatibility and non-immune hemolysis. All reactions were immediate. WB and apheresis platelets were involved in maximum cases. We must encourage use of leucodepleted products. No major difference was found in reactions if expiry date of component involved was within 7 days of transfusion. As expected, recovery time is more in case of hemolytic reactions.

Impact Of National Hemovigilance Reporting System: A Report From Private Hospital Based Blood Centre In India.

Abstract Author(s):-Bala Bhasker, Susan Williams

Affiliation:-Sparsh hospital

Background/ Introduction

Hemovigilance is critical for ensuring patient safety when it comes to blood transfusions. The information gathered by the hemovigilance system aids in the identification of significant changes in the overall blood transfusion process, which is beneficial to patient safety. It is concerned with the systematic monitoring of these events as they occur in a hospital context, with the specific goal of enhancing the overall quality and safety of the transfusion process.

AIM/ Objectives

The goal of this study was to determine the impact of the National Hemovigilance reporting system on our blood center's transfusion operations.

Methodology

Between June 2020 and March 2021, data was collected throughout a ten-month period. The study period was divided into two groups since the National Hemovigilance reporting system was implemented at our center in November 2020. Months in Group I ranged from June to October 2020, whereas months in Group II ranged from November to March 2021. The two groups were compared in terms of the number of donations, donor reactions, blood transfusions, and transfusion reactions. Data were examined using descriptive and inferential statistics to meet the objectives.

Result

The study covered any adverse responses to blood and blood products that occurred during the study period, as well as any adverse donor reactions that were recorded. There were 463 contributions in Group I with no donor reaction documented, compared to 537 donations in Group II with 2(0.37%) donor reactions. Similarly, Group I had 1014 transfusions with 2(0.19%) transfusion responses, whereas Group II received 1381 transfusions with 10(0.72%) transfusion reactions. Allergic reactions to plasma components accounted for 40% of transfusion reactions, while febrile non-hemolytic reactions to red cell transfusions accounted for 40%. After a blood transfusion, the remaining 20% had merely chills and rigors.

Conclusion

Our institution`s hemovigilance program assisted in assessing the wide range of adverse responses related to blood component transfusion. It aided in the improvement of transfusion reaction reporting at our facility, resulting in a 5x increase in transfusion reaction reporting and a 2x rise in donor reaction reporting, as well as enhanced documentation standards. Improved transfusion safety can be achieved by increasing physicians` and nurses` awareness of haemovigilance.

Febrile Nonhemolytic Transfusion Reactions

Abstract Author(s):-Madhwika Sairi

Affiliation:-St. Peter`s Institute of Pharmaceutical Sciences

Background/ Introduction

During Transfusion of blood there will be increase in body temperature by 1 degree common in platelet transfusion and that too in patients who gone through multiple transfusions.

AIM/ Objectives

To throw light on Febrile Nonhemolytic Transfusion Reactions and its occurrence in multiple transfusions of platelets.

Methodology

During Transfusion of blood there will be increase in body temperature by 1 degree common in platelet transfusion and that too in patients who gone through multiple transfusions.

Method

The mechanism of this ailment may be either involvement of white cell antibody in the patient`s plasma which interacts with WBC in blood product. This interaction causes endotoxin release, which influence the hypothalamus and cause fever. The second mechanism involves the generation of leukocyte cytokines during product storage in warmer temperatures.

Direct antiglobulin test (DAT), blood count and repeat ABO grouping may be indicated. Consider investigations for transfusion associated sepsis. In patients with repeated FNHTR, investigation for HLA antibodies may be useful.

Direct antiglobulin test (DAT), blood count and repeat ABO grouping may be indicated. Consider investigations for transfusion associated sepsis.

In patients with repeated FNHTR, HLA antibodies investi may be useful.

Result

Treatment involves administration of drugs like acetaminophen @ 325-500 mg orally. Aspirin should be avoided in such cases.

Conclusion

1–3% of transfusions cause Febrile Nonhemolytic Transfusion Reactions and though this is a temporary reaction sometimes it might lead to serious consequences as a result pf hike in body temperature.

Thrombophlebitis and its influence phrenic health

Abstract Author(s):-Akhila Maduri, Rajasekhar Reddy Poonuru

Affiliation:-St. Peter`s Institute of Pharmaceutical Sciences

Background/ Introduction
A small blood clot causes inflammation and pain which usually reduces with in weeks. But when is not handled carefully might lead to problems like Transient Acute Shock and

AIM/ Objectives
A small blood clot may be generally considered less serious but when it is transient and heads up to narrow blood vessels and might cause serious effects like transient ischemic shock or permanent penumbra. So thereby we need to avoid the occurrence of such clots and also head up towards dissolving of such clots.

Methodology
Varicose veins, Intravenous injection or cannulation, Previous problems with veins, Abnormalities of blood clotting factors, Stasis of blood can lead to blood clots which might cause serious consequences

Result
Thrombus and embolus might lead to serious issues like acute transient shock or Paralysis with penumbra which when not treated in time result in irreversible damage.

Conclusion
Anti inflammatory drugs, Clot dispersants can be very promising in dealing with Superficial Thrombophlebitis and Acute transient shock thus preventing pain and serious irreversible damage

Transfusion Associated Circulatory Overload

Abstract Author(s):-Akhila Mundrathi, Rajasekhar Reddy Poonuru

Affiliation:-St. Peter`s Institute of Pharmaceutical Sciences

Background/ Introduction
Transfusion Associated Circulatory Overload is a disorder due to excess fluid in the circulatory system (hypervolemia) within 12 hours after transfusion.

AIM/ Objectives:-To throw some light on Transfusion Associated Circulatory Overload

Methodology
Dyspnea, Hypoxemia, Peripheral edema, Hypertension and Tachycardia are the most common symptoms of Transfusion Associated Circulatory Overload.

Result
Rapid transfusion of a large volume of blood that might lead to accumulation of fluids in about 15% of cases. Risk factors for TACO are diseases that increase the amount of fluid a person has, including liver, heart, or kidney failure, and also multiple transfusions.

Conclusion
Death from pulmonary edema as the result of circulatory overload following transfusion is a serious consequence. Administration of blood products in slow pace or administration of diuretics concomitantly might cause low or no occurrence of Transfusion Associated Circulatory Overload.

Transfusion-related acute lung injury (TRALI)

Abstract Author(s):-Reethika Bharathhi, Rajasekhar Reddy Poonuru

Affiliation:-St. Peter`s Institute of Pharmaceutical Sciences

Background/ Introduction
Transfusion-related acute lung injury is a blood disorder that might be due to either a reaction to antibodies or to leukocytes in transfused blood. Antibodies directed against human leukocyte antigens (HLA) or human neutrophil antigens (HNA) are known to be involving.

AIM/ Objectives
To show some understanding on the Transfusion-related acute lung injury and the reasons behind it.

Methodology
long-term excessive alcohol use, shock, liver surgery, current smoking, higher peak airway pressure while undergoing mechanical ventilation, positive intravascular fluid balance, low interleukin-10 (IL-10) levels, and systemic inflammation.

Result
Although Transfusion-related acute lung injury can be occurring due to transfusion of all blood products but mostly is found to be associated with fresh frozen plasma, red blood cell, and platelet transfusions.

Conclusion
There is no single test for TRALI; thus, diagnosis is very troublesome and requires a high index of clinical suspicion. Most cases are either unnoticed or misdiagnosed as fluid overload or lung injury due to various other reasons.

Aplastic anemia

Abstract Author(s):-Pranavi Chandragiri, Rajasekhar Reddy Poonuru

Affiliation:-St. Peter`s Institute of Pharmaceutical Sciences

Background/ Introduction
Aplastic anaemia develops a consequence of damage of the bone marrow which might be occurring during birth or due to exposure to radiation, chemotherapy, toxic chemicals, some infections and medicament

AIM/ Objectives
To discuss on the prevalence and occurrence of aplastic anemia

Methodology
The precise incidence of this disease in India is not known due to insufficient epidemiological studies. The main reason is our own immune system attacks our bone marrow.

Result
Bone marrow transplantation is the only remedy that is available for now. Fatigue, restlessness, dizziness, irritability, headache, pale skin color, difficulty breathing, and chest pain are the most common symptoms of aplastic anemia

Conclusion
In 70% to 80% of cases, are idiopathic and also most of the asian population is prone to get this disorder and also the main reason behind this ailment is not yet confirm

Thalassemia and its occurance in India

Abstract Author(s):-Ayesha siddiqua Mohammed, Rajasekhar Reddy Poonuru

Affiliation:-Thalassemia is caused by genetic globin defects leading to anemia, transfusion-dependence and comobidities.Thalassemiain more sever cases forms might require the regular blood transfusion. The protein component of haemoglobin constitute the commonest ress

Background/ Introduction

Approximately 1.5% of the global population are may the carriers(i.e heterozygotes)of the thalassemia.There is a high incidence in population extending from Mediterranean basin through middleEast, Indian subcontinent, south east asia, Melanesia and into Pacific Islands. Mutations occur in the beta-globin gene are the most common cause of genetic disorder in human.
The current year statistics States that may be more than 35% of thalassemia mutations have been reported. keeping the current distribution of the thalassemia the wide diversity of mutations it seems unlikely that may be thalassemia originated in single place and time

AIM/ Objectives

To throw some light on global prevalence in comparison to Prevalence in India

Methodology

Approximately 1.5% of the global population are may the carriers(i.e heterozygotes)of the thalassemia. The current year statistics States that may be more than 35% of thalassemia mutations have been reported. keeping the current distribution of the thalassemia the wide diversity of mutations it seems unlikely that may be thalassemia originated in single place and time

Result

Haemoglobinopathies particularly (hbS, hbE)and beta-thalassemia are important challenges for the tribal population in India. It is mainly restricted in tribal of North East , west bengal, Odisha and some extend those in Andaman Nicobar island. According to current reports more than 10-40% trait frequency has distributed around country. The homozygotes and double heterozygotes with a wide range of group of people and suffering from disease reports states that prevalence of beta-thalassemia carrier 3-4% which translates to 35 to 45 million carries in out multi ethic and culturally and linguistically diversed population of 1.2 billion people which also include 8% of tribal people. Limited mirco mapping has shown as uneven distribution in frequency of beta-thalassemia carriers in different districts in Maharashtra (1-6%) Gujarat (0-95%) The rate of homozygosityper 1000 birth annually was seen 0.28 in Maharashtra and 0.39 in Gujarat in major babies hbE is prevalent in North-eastern and eastern region where hbE Carry range from 3-50%and hbS predominantly seen in among the scheduy castes and other backward castes frequencies varying from 5-35% in many groups

Conclusion

The reason for occurrence and also the level of prevalence of Thalasemia in India and globally is not yet fully established but much research is in progress in this field.

Analysis of Transfusion Reaction Pattern to Recipient Hemovigilance Reporting System-A tertiary Care Oncology Centre Experience

Abstract Author(s):-Vimal Sathyan, Dr Sumathi SH, Dr Shashank Ojha, Dr Suryatapa S, Dr Minal P - Department of Transfusion Medicine, Tata Memorial Centre-Advanced Centre for Treatment, Research and Education in Cancer, Kharghar, Navi Mumbai, Maharashtra

Affiliation:-Scientific Assistant , Department of Transfusion Medicine, Tata Memorial Centre-Advanced Centre for Treatment, Research and Education in Cancer, Kharghar, Navi Mumbai, Maharashtra

Background/ Introduction

Haemovigilance system is the programme which ensures the transfusion safety by monitoring every step of transfusion process from donor to recipient with the ultimate objective of improving the quality and safety of transfusion therapy

AIM/ Objectives

To analyse transfusion reaction pattern of recipient hemovigilance reporting system and identify imputability for implementation of quality policies

Methodology

A five-year (May 2016 to October 2021) retrospective analysis of adverse transfusion reactions (ATR) reported to HvpI through our blood centre was done. Data was analysed for recipient demographics, clinical diagnosis, transfusion reaction patterns, blood component type & frequency of transfusion from the transfusion records of patients designed for reporting to HvpI. The associated imputability factors for the reaction were evaluated with substantial laboratory and clinical parameters in reference to hemovigilance. A consistent reporting culture was forwarded through a hemovigil software in transfusion reaction reporting form (TRRF). Statistical analysis applied with Chi-square test and p-value < 0.05 was taken to be significant.

Result

In our study period, a total of 18724 blood components were issued constituting 55.5% (n=10408) packed red blood cells (PRBCs), 33.3% (n=6253) apheresis platelets (AP) and 11% (n= 2063) fresh frozen plasma (FFP) units. Mean age of the transfused patients was 37.67 years (range: 7- 80 years). A total of 44 (0·23%) ATRs were documented in 44 patients with male preponderance (Male=25 and Female= 19) and the relative incidence (%) of transfusion reactions by total blood components issued was found to be 0·138, 0·90 and 0·005% by PRBCs, AP and FFP respectively. The total number of ATR's reported in our study were 28 allergic (63.6%), 9 febrile non hemolytic transfusion reaction (20.45%) and 3 anaphylactic/hypersensitivity reactions (6.81%). No severe ATR's were reported. Majority (59%) of blood component transfusions were given to patients diagnosed with haematological malignancies amongst whom 54.55% were repeat (>1) transfused patients.

Conclusion

Haemovigilance plays a pivotal role in total quality assurance of blood component transfusion chain. The TRRF devised by the HvpI is a quick tool to capture comprehensive data and reporting culture of suspected adverse reactions in a timely manner has facilitated effective risk management. Our study findings have helped us to target improvement efforts towards product & patient safety to reduce the likelihood of ATR's.

Blood Cancers

Abstract Author(s):-Rafeequnnisa

Affiliation:-St. Peters institute of pharmaceutical sciences

Background/ Introduction

Blood Cancers are the most seriously growing and life threatening disease which if diagonised early , early we can predict the further process.

AIM/ Objectives

To treat and diagnose the people suffering from Cancer is the main objective .

Methodology

The people who have symptoms should be diagnosed according to their symptoms.The symptoms mainly include fever, chills, fatigue, weight loss, loss of appetite, growth of tumors

Result

The people after getting a positive result for Cancer growth or found any tumor in the body should immediately undergo treatment.The treatment includes :

1)Immunotherapy,
2)Cancer Surgery
3) Chemotherapy
4)Stem cell transplantation
5) Radiation therapy

Conclusion

Aur treating any type of cancer be it Myeloma, Leukaemia or a Lymphoma the patient is suggested to visit a Doctor and get themselves diagnosed for Cancer.

Adverse Transfusion Reaction(ATR): Under reported at a standalone blood centre in western India.

Abstract Author(s):-Mr. Sagar Fichadiya, Miss. Sudha Chauhan, Dr. Spruha Dholakiya, Dr. Nishit Vachhani, Dr. Sanjiv Nandani

Affiliation:-LIFE BLOOD CENTRE, RAJKOT, GUJARAT

Background/ Introduction

Transfusion should always be a vigilant decision. Due to increased sensitivity of testing methods, ATR have reduced to a great extent. Still there are certain reactions which might go unnoticed or under reported which needs to be evaluated for optimum safety of the recipient.

AIM/ Objectives

This study aims at establishing the rate of ATR and under reporting, if any; at a standalone blood centre in western part of India.

Methodology

This is a retrospective study of 46 months from January-2018 to October-2021 done at a stand alone life blood centre, Rajkot, Gujarat. The response for ATR is collected in the form of a transfusion reaction reporting form received back by the blood centre along with :(a.) blood bag (b) Plain and EDTA samples collected from the opposite arm immediately post transfusion (c) first void urine sample (d) completely filled TRRF.

The workup on such cases was done as follows:

- Clerical check
  Methods to follow:
- repeat BGRH of patient sample and blood bag (CTT+SPRCA)
- Complete crossmatching (CAT) major and minor
- Direct and indirect coombs' test on patient and donor samples
- Urine samples to check for hematuria
- Serum bilirubin from plain sample of pre and post reaction vacutainer
- Culture of blood bag.

All results documented and sent to the respective hospitals, one copy retained in a workup file.

Result

During the period of 46 months, total 66299 products were issued. Out of which only 0.104% (n=69) reactions were reported. These reactions were as per the order below:

(a) Febrile Non Hemolytic Transfusion Reaction accounting to 63.78 % (44/69), the cause of which can be attributed to the transfusion of RCC/WB OR LR-RCC (in 1 Case only)
(b) Allergic transfusion reactions-28.98% (n=20, 20/69)
(c) DAT positive, AIHA picture-4.35% (n=3,3/69)
(d) Hemolytic transfusion reactions-2.96%(n=2,2/69)

Conclusion

The ratio of reaction to issue is very less probably due to 3 main reasons:

(i) Lack of awareness regarding ATR and failure to identify the same.
(ii) Increased practice of starting transfusion only after shots of anti-histamine and mild corticosteroids.
(iii) Ours being a standalone blood centre (not hospital attached) to receive the reaction form with samples becomes bit of a limitation and hence may be the rate is not reflecting the exact amount of ATR encountered by the transfusion of blood and its components. Hence, the clinicians and the transfusionists should be made more vigilant and aware regarding the possible adverse effects of blood transfusion.

Evaluation and Management of Febrile non-haemolytic transfusion reaction (FNHTR) – Haemovigilance implementation at a Tertiary care Institution

Abstract Author(s):-Thulasiram Nallagondla, Rajendra G. Kulkarni, Abhishekh B

Affiliation:-Department of Transfusion Medicine, JIPMER ,PUDUCHERRY

Background/ Introduction
Globally FNHTR is the most common adverse transfusion reaction. The use of targeted interventions like leukoreduction, sterile connecting devices in selected patients can contribute to reducing such reactions.

AIM/ Objectives
Our study was designed to study the incidence , grade the FNHTR and analyze management as a pilot institutional effort in implementing Hemovigilance guidance document guidelines

Methodology
All the febrile reactions related to transfusion of whole blood and its components issued to various clinical specialties were studied for a period of 1 year 6 months from January 2020 to July 2021were analysed and evaluated as per guidance document, after ruling out other causes of febrile reaction like-HTR, TRALI, Transfusion transmitted bacterial infection (TTBI). The FNHTR were managed according to needs of the patient.

Result
During the study period from January 2020 to July 2021, total 67,105 blood components were issued to various clinical specialties. There were reactions in which 31 had history of fever. After studying nature of fever, clinical examination of patient ,investigations including blood culture, 27(0.04% of total issues) patient had FNHTR and remaining 4 were TRALI. In FNHTR ,17(62%) had only chills and rigors . In them 14(51%) were grades as Grade 1 and Grade 2 are 13(49%). In 27 patients FNHTR were observed in which 15 patient are with h/o no transfusion and 12 patients with h/o previous transfusion.Twenty four (88%)patients developed FNHTR after transfusion of PRBCs . Three(12%)patients had a reaction after platelet transfusions.All 27 patients were managed symptomatically with paracetamol and stopping transfusion. Three patients required repeat transfusions. Hence ,three patient were issued Lab side leucofiltered blood bags for transfusion ,post transfusion uneventful

Conclusion
In our study we analysed among the adverse transfusion reactions ,FNHTR is the most common reaction was reported in our institute. Most of FNHTR adverse events are mild reactions without any complications . Symptomatic treatment needed for management of patient, recovered without any sequelae.

Need of Single Donor Platelets (SDP) in thrombocytopenia in dengue patients

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Affiliation:-Jabalpur hospital & Research Centre Jabalpur, Madhya Pradesh (INDIA)- A 300 bedded Multi Specialty NABH Accredited Hospital

Background/ Introduction

Dengue fever is a mosquito-borne tropical disease caused by the dengue virus. Symptoms typically begin three to fourteen days after infection.

These may include a high fever, headache, vomiting, muscle and joint pains, and a characteristic skin rash.
Treatment depends upon the symptoms those who can drink; passing urine, have no warning signs and or otherwise healthy can be managed at home with daily follow up and oral re hydration therapy.
Intravenous hydration, if required, is typically only needed for 1- 2 days.
Indication for SDP transfusion according to WHO guidelines-
In general there is no need to give prophylactic transfusion where platelets count is even at less than 20,000/micro litre.
Prophylactic transfusion may be given at a level of less than 10,000/ micro liter.
1) In absence of bleeding manifestation
2) In case of systemic massive bleeding the transfusion may be needed in addition to RBC transfusion.

AIM/ Objectives

1. To find out the pattern of dengue fever
2. Relation of SDP transfusion with thrombocytopenia conditions
3. To find out any transfusion reaction in patients whom SDP is transfused

Methodology

Sample collection-whole population taken for study
Data Collection tool: Retrospective, Record base.
Study of patients suffering dengue admitted in Jabalpur Hospital & Research Centre from 1/08/21 - 30/09/21.

Result

A) Total- 575 dengue patient taken for the study of month August & September 2021.In which 518 were NS1 positive, 18 were IgG positive, 83 were IgM positive.
B) Platelets count-
0-10,000/micro liter-Total 39 patients (6.78%)
11,000-20,000/micro liter-Total 86 patients (15%)
21,000-50,000 /micro liter-Total 198 patients (34.4%)
51,000-1, 00,000 /micro liter-Total 109 patients (19%)
>1, 00,000/micro liter-Total 143 patients (24.8%) were found
C) Out Come-
Normal Discharge-524 (91%)
DAMA-45(7.8%)
Deaths-06 (1.04%)
D) Transfusion-

Single donor platelets (SDP) transfusion-61
Platelet Rich Plasma (PRP)-5
Fresh Frozen plasma (FFP)-1
Total 67 patients (11.4%) out of which only 1 transfusion reaction has been observed which found to be febrile non-hemolytic transfusion reaction.

Conclusion

Dengue is a mosquito borne disease particularly observed in rainy seasons. Mainly characterized by thrombocytopenia and confirmed by different pathological test like NS1, IgG,IgM etc.
In most of the cases there is no need of any platelets transfusion and supportive therapy is sufficient. In this study it is observed that around 12 % cases needed transfusion.

A Case Report of Anaphylactic Reaction leading onto Disseminated Intravascular Coagulation in a Postnatal Mother.

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Affiliation:-The Tamilnadu Dr.MGR Medical University.

Background/ Introduction

Allergic transfusion reactions, range from a rash to anaphylaxis .Anaphylactic reactions, are less common occurring in upto 1 in 20,000 transfusions.

AIM/ Objectives

The aim is to diagnose a case of Anaphylactic transfusion reaction promptly and to manage it.

Methodology

A 25 year old female patient ,G2/P1/L1/ term /previous full term normal vaginal delivery was admitted at a secondary care hospital for safe confinement. Her hemoglobin on admission was 8.2 gram/dL , group B Rh D positive. 1 unit of packed cells was transfused . Immediately after the start of transfusion , patient developed dyspnea, urticaria and fever (38.8 C) .Transfusion was discontinued , injection dexamethasone and pheniramine maleate given. The symptoms resolved. She delivered an alive male baby the next day,there was no post partumhaemorrhage and in the first postnatal day her hemoglobin was 7.4 gram/dL .1 unit of packed red cells was transfused carefully along with premedication with anti histamine and dexamethasone.But the reaction recurred . Patient was treated with intravenous fluids ,injection noradrenaline drip maintained at a rate of 12 to 16 drops/minute according to blood pressure.Her blood sample and Blood bag was sent for transfusion reaction work up to our blood bank.

Result

Her transfusion reaction workup did not reveal any major ABO mismatch. Antibody screen was negative. Blood bag and patient post transfusion sample culture report was negative. Her hemoglobin was 3.8 gram/dL,platelet count 53200/microlitre, serum bilirubin 2.9 mg/dL and aspartate transaminase(SGOT)1866 units/L,lactate dehyrdogenase 1398 U/L,prothrombin time and aPTT increased and fibrin degradation products positive(>5.0) . In view of anaemia with failure and to prevent further reaction , packed red blood cells were Coombs crossmatched and washed. Transfusion was started slowly under medical supervision. The transfusion was uneventful . Three more units washed and transfused. The patients hemoglobin 8.8 gram/dL,bilirubin 0.9mg/dL,PT and aPTT normal,SGOT 40U/L . We did not observe any reaction on transfusing washed red blood cells .

Conclusion

The features of transfusion reaction was suggestive of severe anaphylactic reaction leading onto early Disseminated intravascular coagulation, with transaminitis due to ischemic hepatitis. Anaphylactic reactions in most severe forms can cause death, effort should be made to prevent such catastrophic consequences. We employed washed red cells to prevent further anaphylactic transfusion reactions.

INCIDENCE OF ADVERSE TRANSFUSION REACTION IN A TERTIARY CARE CENTER

Abstract Author(s):-Dr.Krishna mayani* Dr.Shweta upadhyay** Dr.Jitendra Vachhani*** *3RD year resident **Associate professor ***Professor & Head. Department of I.H.B.T

Affiliation:-M.P.Shah Government Medical College, Jamnagar,Gujarat,India.

Background/ Introduction
Blood transfusion is a life saving medical intervention. Transfusion reactions are adverse events associated with the transfusion of Whole blood or one of its components .Their severity range from minor to life threatening and can occur during a transfusion – acute transfusion reactions, or days to weeks later – delayed transfusion reactions.

AIM/ Objectives
The aim of the study is to estimate the incidence and pattern of transfusion related adverse events in our center.

Methodology
This was retrospective study over a period of 28 months(june2019 to october2021). The data was collected from standardized records of department of transfusion medicine. for the investigation of transfusion reaction, transfusion reaction form filled and sent to blood bank along with blood product bag & post transfusion blood and urine sample of patient.

Result
Incidence of adverse transfusion reaction during study period is 0.02%, total of 22 reactions.the most common type of transfusion reaction among all the ATRs was Allergic reactions (40.9%), followed by febrile non -hemolytic TR (22%), edema (18.18%). Red cell concentrate transfusion (86.36%) contribute majority reactions followed by fresh frozen plasma (9.09%), platelet concentrate(4.54%). ATR seen more commonly in female (77.27%) than male (22.72%).

Conclusion
Acknowledgement of transfusion reaction can help to prevent this ATR before it’s occurrence by precautionary actions.

PREVALENCE OF DELAYED HEMOLYTIC TRANSFUSION REACTION IN ONCOLOGY PATIENTS WITH POST-TRANSFUSION HYPERBILIRUBINEMIA ATTENDING A TERTIARY CARE HOSPITAL IN SOUTH-EAST KARNATAKA

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Background/ Introduction

Delayed hemolytic transfusion reactions (DHTRs) occur 3-10 days after the transfusion of RBC products that appear to be serologically compatible. These reactions occur in patients who have been alloimmunized to minor RBC antigens during previous transfusions or pregnancies and pretransfusion testing fails to detect these alloantibodies due to their low titer. Clinical presentation of DHTRs includes unexpected drop in hemoglobin or less than expected post transfusion increment in hemoglobin following transfusion. Symptoms of extravascular hemolysis may include fever, chills, jaundice, back pain and uncommonly renal failure. For diagnosing a suspected DHTR, post transfusion specimens should be evaluated for antibody identification and direct antiglobulin (DAT) studies. A positive antibody screen with a newly identified alloantibody or a positive DAT will help confirm the reaction. Specific treatment of DHTR is usually not necessary unless symptomatic anemia is present. In these cases, additional RBC transfusions with RBC products that lack the identified antigen corresponding to the newly developed alloantibody may be necessary.

AIM/ Objectives

To analyse the prevalence of delayed hemolytic transfusion reaction in oncology patients with post-transfusion hyperbilirubinemia attending a tertiary care hospital in South-East Karnataka

Methodology

Oncology patients who were giving complaints of jaundice 1-2 weeks post transfusion were subjected to immuno-hematological investigations (DAT, Indirect antiglobulin test/IAT, antibody screening) and peripheral smear examination for evidence of hemolysis. The suspected DSTR reporting occurred between August 2021 to November 2021.

Result

Out of 7 cases, only 2 were found to have hemolysis due to red cell antibodies and fragmented red cells seen in peripheral smear. Both cases were DAT positive and a negative IAT after auto-adsorption. There was no evidence of mismatch transfusion among these DAT positive patients and the donor samples were negative for DAT and IAT during routine antibody screening in donated blood units.

Conclusion

Majority of post transfusion hemolysis in Oncology patients may not be related to allo-immunisation. Supportive pathological and laboratory investigation are important in ruling out delayed serological transfusion reactions in oncology patients.

Blood Cancers

Abstract Author(s):-Rafeequnissa, P. Rajasekhar

Affiliation:-St. Peter`s Institute of Pharmaceutical Sciences

Background/ Introduction:-

Blood cancers are one of the most serious and life-threatening diseases. Blood cancers represent a large group of different malignancies which includes cancers of bone marrow, spleen, thymus, lymphatic system, tonsils.

Types of blood cancers:

Leukemia: This cancer is mainly targeting the white blood cells or the cells that become white blood cells. Leukemia prevents the WBC's from fighting the infections caused to the human body. Leukemia can either be acute or chronic. It is most common for children until the age of 15.

AIM/ Objectives:-

To through some light on Blood cancers

Methodology

Lymphoma: The cancer of lymphatic system, especially seen in lymph nodes which affect the lymphocytes. They are most commonly seen in adults. It is of two types –

a) Hodgkin's lymphoma: It limits the body abilities. Symptoms include fatigue, fever, chills. It can be found in Lymph nodes of neck, armpits, groin.

b) Non-Hodgkin's lymphoma: It marks the occurrence that body produces many abnormal lymphocytes. Symptoms include swollen nodes, weight loss, chest pain.

Result

Myeloma : Cancer of plasma cells which make antibodies for the protection of a human body.
Making the body more susceptible to infections.

Conclusion

People at risk of Blood cancer:

Although the risk factors are unknown, but it is estimated that people who have a family history of Blood cancer are at risk. Also, it is believed that cancers develop when genetic and environmental factors are combined. So, smoking, radiation exposure and exposure to certain chemicals such as Benzene are connected to the risk of getting Cancer.

Symptoms:

- Fever
- Chills
- Fatigue
- Weakness
- Weight loss
- Loss of appetite

Treatment:

- Chemotherapy
- Radiation therapy
- Surgery
- Stem cell transplantation
- Immunotherapy

Assessment of iron status in regular blood donors in a tertiary care hospital in Southern India

Abstract Author(s):-Dr Anju joy, Dr Debdatta Basu,Dr Abhishekh, Dr Zachariah Bobby

Affiliation:-Department of Transfusion medicine,JIPMER ,PUDUCHERRY

Background/ Introduction
Regular blood donation depletes iron stores. The assertion is that the vulnerable donor population requires a predictive SOP for early detection of iron store depletion, preventing them from developing iron deficiency anemia.

AIM/ Objectives
To study the potential effects of blood donation in the regular donor group using hematological and biochemical estimation of iron status parameters.

Methodology
The CBC was performed on the Sysmex Coulter, and the red cell indices were calculated. The ferritin and the soluble Transferrin Receptor assays were performed using Enzyme Immunoassays

Result
A total of 323 regular blood donors(6 were females) were included in the study of which they were categorized into three, 211 donors with less than or equal to 10 donations,84 those who had donated between 11 to 20 times and 28 who had donated more than 20 times. The red cell indices were reduced and different in the groups but not statistically significant except for Mean Corpuscular Volume (MCV). About 15% of the study population had a transferrin level of less than 15 ng/ml. The Ferritin levels showed a statistically significant negative correlation with the number of donations, the correlation coefficient being -0.27. Logarithmic ratios of sTfR/ferritin also correlated with a coefficient of 0.156 with the number of donations and were statistically significant.

Conclusion
Our study found that regular blood donors had low iron stores, as shown by ferritin levels and other iron indicators. Using the current guidelines (Hb>12.5g/dL) for donation, or the red cell indices alone do not reflect the donor`s actual iron status.

INCIDENCE OF ADVERSE TRANSFUSION REACTION IN A TERITARY CARE HOSPITAL SOUTH INDIA, 17 MONTHS RETROSPECTIVE STUDY

Abstract Author(s):-Dr Anju Joy, Dr Dibyajyoti Sahoo

Affiliation:-Department of Transfusion Medicine ,JIPMER,Pondicherry

Background/ Introduction
Blood transfusion services, life saving medical intervention has reached newer heights over past decades ,still associates with adverse transfusion reactions. This study is conducted to estimate the incidence and determine the nature of blood transfusion reactions in our hospital.

AIM/ Objectives
To assess incidence of adverse transfusion reaction in a tertiary care hospital south India.

Methodology
The present retrospective observational study was conducted in the Department of Transfusion Medicine from august 19-december 20 (17 months)at a teriteriary care center in south india. All the Adverse transfusion reactions were investigated in detail in the blood bank for the clerical errors, immunohematology workup and classified according to their nature with imputability assessment.

Result
A total of 66221 units of components were issued to various departments in the hospital. Total 84 transfusion reactions were reported to the blood bank following transfusion of components only(0.13%). The most common type of transfusion reaction among all the ATRs was febrile nonhemolytic transfusion reaction (38%), followed by allergic(33%). . Fever and chills ,rigors (23%) were the most common symptom noticed in ATR followed by dysnea(16%),rashes (11%) and tachycardia (9.6%). . red cell concentrate (RCC) transfusions(76%) contribute to majority of reactions followed by Platelet concentrate and platelet¬rich plasma.a single case of bacterial contamination was found in this study.

Conclusion
Incidence of reactions in our study is low compared to similar studies.Advances in serology and transfusion services have significantly reduced their incidence.Advances in the understanding of the pathophysiology of reactions help guide the management of patients undergoing reactions.Technological advances in red cell modification like leukofitration for FNHTR,washing for allergic reactions and anaphylactoid reactions and avoiding unnecessary transfusion implementing PBM ,other oxygen carrying solutions will significantly change red cell transfusion practice in the future.

"A STUDY ON HEMOVIGILANCE AUDIT OF A TERTIARY CARE HOSPITAL TO ENSURE SAFE BLOOD TRANSFUSION IN PATIENTS "

Abstract Author(s):-Dr. Snehal Mujumdar - Director Blood Transfusion Services, Ruby Hall Clinic Dr. Shubhangi Amate - Quality Manage Ms. Vijayalaxmi Biliangadi - Quality Officer

Affiliation:-Grant Medical Foundation, A.H Wadia Trust Blood Bank (Center), Ruby Hall Clinic, Pune

Background/ Introduction

To Ensure Vein to Vein safety (donor's vein to patient's vein) , the Hospital Transfusion Committee formed a new 'Hemovigilance Committee' on 10.02.2016 This was to identify and prevent occurrence of transfusion related undesirable events and increase safety and efficiency of transfusion.

AIM/ Objectives

AIM: To ensure right blood Component to the right patient at the right time in right quantity ensuring right practices and to do it right the first time.

OBJECTIVES: To monitor Blood Transfusion, to identify, report, investigate and analyze adverse events including but not restricted to transfusion reactions.

- To design a system to ensure that the end point of a safe and effective transfusion is achieved.
- To collect, interpret and use information for further improvement

Methodology

The first step was formation of the 'Haemovigilance Committee :

Members: Medical Director , Nursing Director, Director of Blood Transfusion Services, Head of the Quality Assurance Department , Medical Coordinators and Nursing Supervisors.

Process of Conducting the Audit:

•Medical Coordinators and Nursing Supervisors currently audit minimum 3% cases of transfusion per week .

•A 'Haemovigilance Audit Form' is introduced to record the observations, non compliance , root cause analysis , corrective and preventive action .

•Cases are audited for both on going and completed transfusions. Monthly Analysis is ensured

• Meetings and training sessions are arranged as Preventive Action.

•Quarterly meetings are held and observations are used to make any change in Policies / Procedures if felt necessary.

Result

The Percentage of cases audited has almost doubled. The Non compliance reduced from 15.3% in 2016 to 2.87% in 2020. 'Disruptive Results Were Achieved'. The problem of incomplete consent forms and Blood Transfusion Check list folder is markedly reduced. There is assurance that all Transfusion Reactions are reported and all cases of 'Pre medication' before transfusion are justified. There is an assurance that vital parameters are closely observed. All transfusion related records and documents are uniformly preserved and easily retrievable . There is a definite improvement in the transfusion practices in Critical Care areas as well as General Wards over the years. There is improved communication between all stake holders.

Conclusion

It is one of the 'Best Practice' deployed at Ruby Hall Clinic to ensure Transfusion safety ensuring satisfied patient, relatives as well as the staff and Management.

A Comparative Study of Adverse Transfusion Reactions between Paediatric and Non Paediatric patients in a Tertiary Care Hospital in Northern India

Abstract Author(s):-Dr.Vaidehi Prasanth1,Dr.Daljit Kaur2,Dr.Ashish Jain2,Dr. Gita Negi3,Dr Aswanth K.S4,Ms Indu Parmar5

Affiliation:-1.Junior resident,Department of Transfusion Medicine AIIMS Rishikesh 2.Assistant Professor,Department of Transfusion Medicine AIIMS Rishikesh 3.Professor,Department of Transfusion Medicine AIIMS Rishikesh 4.Junior resident,Department of Paediatrics AIIMS

Background/ Introduction

Adverse transfusion reactions in paediatric population vary in type and frequency .This study aims to characterize differences between pediatric (age<18) and non paediatric(age>18) patients regarding adverse transfusion reactions

AIM/ Objectives

1.To assess number of adverse transfusion reactions in past two years.
2.To compare adverse transfusion reactions between paediatric and non paediatric patients on the basis of number,type and implicated blood component for the adverse reaction.

Methodology

A retrospective observational analysis of all reported transfusion reactions for both paediatric and non paediatric patients was done for a period of 2 years(between October 2019 to September 2021) by Department of Transfusion Medicine at a tertiary care hospital. The adverse transfusion reaction data is routinely shared with national hemovigilance database.

Result

A total of 60328 (paediatric -3900 non paediatric-56428) transfusions were performed at our hospital during the study period, including 16014 platelet (PLT) transfusions(paediatric-1861 non-paediatric-14153),19284 plasma transfusions(paediatric -582 non paediatric-18702), and 25030 red blood cell(paediatric -1414 non paediatric-23616) transfusions. Over same period, 26 paediatric and 100 non paediatric transfusion reactions were recorded.This corresponds to an incidence of 6.6 adverse reactions per 1000 transfusions within paediatric (age < 18) population and an incidence of 1.7adverse reactions per 1000 transfusions within non paediatric population. In both non paediatric and paediatric populations, transfusion reactions were most commonly associated with PRBC, followed by platelet and plasma in the paediatric population. Within paediatric population, higher incidence was observed for allergic transfusion reactions (50% vs 36%-in non paediatric) while febrile nonhemolytic transfusion reactions (30% vs 47%-in non paediatric) were higher among non-paediatric .The male preponderance was observed in both paediatric and non paediatric patients.

Conclusion

This data provides insight into a general increase in incidence of transfusion reactions within the pediatric population and the rate of allergic transfusion reactions is found to be higher in paediatric population. Hence guiding both transfusion physicians and treating clinicians to provide adequate pre-transfusion information related to adverse transfusion reactions to attendants of paediatric population.

Evaluation of a case of Pseudotransfusion reaction

Abstract Author(s):-Dr Neha Syal,

Affiliation:-Assistant Prof, Gian Sagar Medical College and Hospital, Rajpura

Background/ Introduction

Background- An adverse reaction is an undesirable response or effect in patient temporally associated with administration of blood or blood component. Febrile non hemolytic transfusion reactions are common and may present with chills /rigors even in absence of fever.

AIM/ Objectives

I present a case where a patient suffered from transfusion reaction twice and an observed third transfusion was tried.

Methodology

Case report- In January 2019, a 62 year old female patient in oncology department was transfused PRBC due to anemia. The patient complained of chills within 5 to 10 minutes of initiation of transfusion. She was afebrile and other vitals were also stable. Transfusion was stopped and bag was sent along with samples for reaction workup. No significant finding was observed in reaction workup and it was labeled FNHTR. Next day patient was premedicated and transfusion was started using a leucoreduction filter but patient complained of similar symptoms so bag was again sent back to blood centre for reaction workup. Post transfusion reaction workup again showed no significant findings. On day 3, transfusion was reattempted with all precautions in presence of transfusion medicine specialist but patient again complained of chills while other vitals being stable. When asked in details patient explained that she could feel the cold blood being transfused. Transfusion was stopped and patient was warmed with room heater and blankets. After 30 minutes, transfusion was reattempted at a slower rate under observation and was completed uneventfully.

Result

Discussion- In our institute, blood is transfused to patient within 30 minutes of issue from blood centre as per national guidelines. During winters when the ambient temperature is around 5°C, transfusion of cold unit can cause patient to feel cold and have chills. Lack of adequate knowledge and fear of any adverse event causes physicians to stop transfusion at slightest symptom even if it is not related to transfusion.

Conclusion

Transfusion reactions are common with fever and chills being a very common presentation. Physicians being untrained in the topic tend to panic with the slightest symptoms which often lead to false alarm. It is imperative to impart knowledge of transfusion reactions and their management to all physicians to avoid such situations for the physicians as well as patients.

IMPROVEMENT IN NABH PROPOSED KPI: ADVERSE DONOR REACTION RATE (ADRR) BY CONTINUOUS CLINICAL AUDIT AND INTERVENTIONS

Abstract Author(s):-John Gnanaraj ,Sunil Jai Karnesh G, Abhishekh B, Rajendra G. Kulkarni,

Affiliation:-Department of Transfusion Medicine, JIPMER, Pondicherry

Background/ Introduction

The quest for blood safety has led to tremendous growth in blood quality management systems. National Accreditation Board for Hospitals and Healthcare providers (NABH) has framed ten Key Performance Indicators (KPI), among which ADRR is a mandatory KPI. This will provide a road map to assess, audit, and implement Corrective action and Preventive action (CAPA) to correct deviations, ensuring better donor care and blood safety.

AIM/ Objectives

To assess ADRR as proposed by NABH in our blood centre, identify the factors associated with deviation of this KPI, and assess the impact of the quality improvement programs.

Methodology

This is a clinical audit was done at our tertiary care hospital from August 2019 to December 2020. Each audit comprised of 3 stages: Data collection; data analysis, interpretation; and quality Improvement plan with implementation of CAPA in the following cycle like pre-donation hydration, stringent donor selection measures, donor distraction by verbal communication and improvement of phlebotomy skills. Each audit cycle was four months each and was repeated four times during the study period. Statistical analysis was performed using SPSS version 22.0.

Result

During various cycles of the audit, a total of 15,439 whole blood units were collected from 11,463 (74.24%) family voluntary donors, 2378 (15.4%) replacement donors, and 1598 (10.4%) voluntary donors. One hundred thirty-five donors experienced vasovagal reactions, while for the rest of 15304 donations, the donation process went uneventful. Systemic donor reaction rate of 0.87% was observed in this study, of which 5.92% of donors experienced a reaction of moderate grade and 5.18% of blood donors experienced severe grade reaction. The majority of the systemic reactors had donated for the first time (89/65%). The number of local reactions observed during the study in all the audit cycles was 111 (0.7%), in which the double prick incidents were 62, which constituted 55.5% of all local reactions and 49 (44.14%) hematoma formation. The total ADRR has reduced from a mean of 1.71±0.95 in the first cycle to 1.21±0.47 in the fourth cycle of the audit by implementing interventions such as reinforcement of strategies mentioned.

Conclusion

Through this study, we have actively captured and analyzed multiple cross-sections of non-conformances, self-assessment, internal audits, feedbacks and taken practical steps to rectify it. Persistent continuation of the clinical audit program will help us achieve and improve upon the benchmarks.

AUDIT OF TRANSFUSION FEEDBACK FORMS:RESULTS AND INSIGHTS

Abstract Author(s):-U D'mello, R Sawant, V Vadera

Affiliation:-Department of Transfusion Medicine, Laboratory medicine Kokilaben Dhirubhai Ambani Hospital

Background/ Introduction
The weakest link in the transfusion chain currently is the handling of blood components after their issue and the bedside blood administration practices.

AIM/ Objectives
To evaluate compliance with standard procedures for bedside blood transfusion practices with specific reference to time taken for transfusion episode, by analysis of the "Transfusion feedback forms" in a tertiary care multi-specialty hospital setting.

Methodology
During the study period of 22 months, the transfusion feedback forms received from various clinical areas of the hospital were studied with special reference to the time taken for transfusion of individual blood component. The data was categorized based on the patient's location as well as the time of transfusion, whether done in routine or emergency hours.

Result
33380 blood components were issued during the study period, while transfusion feedback forms for 30102 components (90.18%) were received in the transfusion medicine department. Delay in starting the transfusion (more than 30 minutes after issue) was observed in 683 transfusion events (2.05%). The component transfusion time exceeded the permissible limits for 435 components (1.4%).The overall total permissible time for completion of components exceeded permissible limit in 407 (1.3%) of transfusion events. The pediatric ward (14%), ICU and OT complex (40%) were found to be the most non-compliant locations. Amongst the 683 delayed transfusions after issue, 509 (75.%) were during the routine hours i.e. between 7am to 7 pm and 174 (25. %) were in the non routine hours i.e. between 7 pm to 7 am.

Conclusion
The audit of transfusion feedback forms has given us a good insight into various areas of non – compliances as well as the predominant locations in the hospital where the practices need to strengthened further. Focused training program on safe blood administration practices for all staff involved in handling and transfusion of blood components is now planned to combat this issue.

Post Donation Covid 19 infection in a blood donor During The Corona Virus Pandemic – A Case Report

Abstract Author(s):-Raees Ahmed,Pradnya Chavan, Rajesh B Sawant, Varsha Vadera

Affiliation:-Kokilaben Dhirubhai Ambani Hospital, Mumbai.

Background/ Introduction
COVID-19 is the infectious disease caused by the Novel Corona Virus (SARS Cov-2) amongst humans. COVID-19 was declared as a pandemic by World Health Organisation on 11 March 2020. The Government of India too declared a state of lock-down in-order to prevent the spread of infection. This pandemic brought the entire world to a standstill but blood donation cannot take a halt since the need for blood transfusion still remains. Protocols were developed and issued by the NBTC, SBTC & MoHFW related to norms to carry out blood donation activity safely. As per NBTC guidelines, along with post-donation instructions, the donors were also advised to report if they developed any symptoms within 14 days of their donation and active follow-up was kept by blood centre staff too.

AIM/ Objectives:-NA

Methodology:-NA

Result
A 27-year-old male, first time blood donor, driver by profession, belonging to West Bengal but living in Mumbai, was detected positive for COVID-19 infection on the sixth day after his donation. The blood centre was alerted and immediately all blood components prepared from that particular unit were traced. The PRBC and FFP was quarantined immediately while the RDP had already been discarded since, it had not been luckily utilized within its shelf life of five days. The donor questionnaire was re-examined which confirmed that the donor had no symptoms or any significant contributing history at the time of donation. The blood centre personnel involved in handling of the donor were alerted immediately and were monitored for development of any symptoms related to COVID-19 infection. Plasma of the donor from the quarantined blood components was sent for evaluation by the RT-PCR method, the results of which were reported as negative.

Conclusion
This case scenario significantly highlights the great importance of scrupulous follow-up of donors, post-donation (upto 14 days) for ensuring transfusion safety during this pandemic. It is also an important part of donor hemovigilance. The unanswered questions related to possible transfusion of components from such a donation need to be addressed at various levels for policy decision making.

Shortcomings in reporting of Acute Respiratory Distress following Blood Transfusion: HemovigIlnce Data Analysis from a Tertiary Care Center in South India

Abstract Author(s):-Shahida, Rajendra G Kulkarni, Abhishekh B

Affiliation:-Department of Transfusion Medicine, JIPMER

Background/ Introduction
Acute respiratory distress is characterized by rapid onset of dyspnea, hypoxemia and diffuse pulmonary infiltrates causing respiratory failure. It is one of the main acute clinical complication in critically ill patients which is associated with significant rate of morbidity and mortality. Transfusion related respiratory distress can be due to Transfusion related acute lung injury (TRALI), transfusion associated dyspnea (TAD), transfusion associated circulatory overload (TACO) and respiratory distress following allergic reaction or anaphylaxis.

AIM/ Objectives
To analyze the shortcomings in reporting of acute respiratory distress following blood transfusion as per hemovigilance guidance document.

Methodology
We conducted a retrospective observational study of our transfusion associated respiratory distress reported from Jan 2020 to Jun 2021. All cased were analyzed and evaluated as per the hemovigilance guidance document after ruling out other causes of acute lung injury in the patients

Result
A total 28,987 transfused patients during the study period and only 15 patients had respiratory symptoms in the form breathlessness and which were acute in onset and unrelated to other disease conditions. Out of these, only one case reported as definite TRALI met all the 5 criteria as per the hemovigilance guidance document. Two cases of TACO and one case of TAD were diagnosed as per hemovigilance guidance document. Other cases did not fulfill the criteria mentioned in the guidance and we could give only possible imputability. In all these cases the necessary investigations like chest x-ray for bilateral infiltrates, BNP, required for proper diagnosis were missing

Conclusion
Awareness has to be created among the physicians and transfusion medicine specialists regarding the investigations required so that proper reporting is possible. Active interventions like introduction of BNP testing, chest X-rays for all the suspected cases can bring down the fallacies in reporting

Adverse Transfusion Reactions in Paediatric Patients:2 Years analysis of Hemovigilance Data from a Tertiary care center in South India

Abstract Author(s):-Esha Toora, john G Gnanaraja, Abhishekh B, Rajendra G Kulkarni

Affiliation:-Department of Transfusion Medicine, JIPMER

Background/ Introduction

Blood components are lifesaving, but also associated with many adverse events, which remain under-reported. As the paediatric population differs from the adult physiologically and biochemically, adequate data is necessary to understand the fallacies of the blood transfusion services and the requirement of any special efforts to deliver better outcomes and improve the paediatric transfusion practice strategies.We undertook this descriptive study to find out the incidence of transfusion reactions in the paediatric patient population

AIM/ Objectives

To study the incidence of transfusion reactions, types of adverse events and the blood products resulting in the transfusion reactions in the paediatric population.

Methodology

This is a retrospective study through which data regarding all the blood transfusions, incidence of transfusion reactions, types of adverse events and the blood products resulting in transfusion reactions in the paediatric population(0-18 years) was collected and analysed from August 2019 to August 2021 for two years.

Result

99,854 blood components were transfused during the study period, out of which 7584 were paediatric transfusions. Paediatric transfusions made up 7.59% of all blood component transfusions. Transfusion reaction rate in adults was 0.117%, whereas in pediatric patients it was found to be 0.016%. Packed Red blood cells (PRBCs) have made up more than half of all transfusions nine (56.2%) which lead to adverse event, with platelet concentrates and fresh frozen plasma causing five (31.2%) and two (12.5%) respectively. Sixteen patients suffered adverse events following transfusion; seven Febrile non-hemolytic, seven allergic (1 anaphylactic, six minor allergic), one transfusion induced anxiety attack, and one unrelated to transfusion. Imputability was certain in 2 cases, probable in 11 cases, possible in 1, and unlikely in 2 patients.

Conclusion

Adverse transfusion reaction rate was lower in the pediatric population compared to adults. Similar to adult population FNHTR was the most commonly encountered adverse reaction followed by allergic transfusion reactions. Difficulty in identification of reactions can lead to under-reporting. Improved transfusion safety protocols & awareness of the treating clinicians about the identification of transfusion reaction will tackle the under-reporting problem and help plan and strategize reaction mitigation such as blood product modification for safe and adept blood transfusion services.

Reporting and Analysis of Transfusion reactions in a Paediatric Tertiary care unit of Mumbai.

Abstract Author(s):-Dr Suverna kirolikar, Suchita Topale, Dr Kalpana Velaskar

Affiliation:-Department of Transfusion Medicine, SRCC children s hospital Managed by Narayana health Mumbai.

Background/ Introduction

Blood transfusion services have undergone major advancements in the last decade. However,the system of recording and reporting of the adverse events related to blood transfusion needs to be developed to meticulously capture adverse events.This study was carried out with the objective of observing and analysing the transfusion reactions encountered in the Bone marrow transplant unit, Cardiac surgery unit of our hospital.

AIM/ Objectives

To perform the complete work up of the Transfusion reactions reported to the Transfusion medicine department in a Paediatric Tertiary care unit of Mumbai.
To Analyse Transfusion reactions reported to the Transfusion medicine department.

Methodology

This was a retrospective observational study in which Transfusion reactions reported to the blood bank over a period of four years (July 2017 to October 2021) were reviewed and analysed along with their post transfusion work up which was done at our department for every reaction all these reactions were further analysed in detail and reported to Haemovigilance programme of India.

Result

The total number of transfusion reactions observed over the study period were 39 out of which 15 were Allergic transfusion reactions and 9 were Febrile Non haemolytic transfusion reactions followed by 7 haemolytic transfusion reactions, 3 Transfusion associated dyspnea, 2 Hypotensive transfusion reactions and 1 each Transfusion Associated Circulatory Overload and Transfusion Related Acute Lung Injury. Out of these 30 (n=39) patients had a history of repeated transfusions.The different components involved with the Transfusion reactions were packed red cell units 0.24% (n=9900), 0.063% Random donor platelets (n=6290), 1% Single donor platelets (n=497) and 0.13% Fresh frozen plasma (n=5970) in our hospital during the study period .
It is difficult to detect Transfusion reactions in the paediatric patients and constant monitoring by the skilled nurses is required for the same. The Haemovigilance nurse of our hospital played an important role in following up the Transfusion reactions and creating awareness about the same.

Conclusion

In the present study Allergic Transfusion reactions were predominant in the patients of the age group of 6 to 12 years with history of multiple transfusions. Packed red cells were the most common component involved with the Transfusion reactions.

AN EPIDEMIOLOGICAL STUDY ON ADVERSE TRANSFUSION REACTIONS IN TERTIARY HOSPITAL

Abstract Author(s):-RAJENDRA PRASAD,NEETU KUKAR,ARASHDEEP SINGH,ANJALI HANDA,NAVREET SINGH

Affiliation:-IHBT,GGS MCH,FARIDKOT

Background/ Introduction

Transfusion reaction means any transfusion related adverse event that occurs during or after the transfusion of whole blood, blood components, or human derived plasma products. Transfusion reactions can be classified according to time interval- acute (within 24 hours) or delayed (after 24 hours), immune versus non-immune, infectious or non-infectious. Knowledge about various types of adverse transfusion reactions will help not only in their early identification and management but also in taking adequate measures to prevent the same.

AIM/ Objectives

1. To determine the proportion of reported and unreported adverse transfusion reactions.
2. To evaluate various reasons and predisposing factors responsible for unreported cases.

Methodology

The present study was conducted in the Department of IHBT, after approval by the Hospital Ethics Committtee, over a period of one year

All blood transfusions occurring in this hospital were followed up and transfusion reactions reported and unreported were worked up.

Result

During 1 year study period, a total of 23,639 blood and blood components were issued to various clinical departments. The total number of transfusion reactions were 48 i.e. (0.20%), of which 16 (33.4%) were reported, 32 (66.6%) were unreported. Incidence of FNHTR were the maximum 30 (62.5%), followed by allergic 16 (33.3%) and anaphylactic reactions 2 (6.2%). Out of 48 transfusion reactions , 36 were associated with history of multiple or repeat transfusions, remaining 12 were with 1st time transfusion.

Conclusion

Unreporting of transfusion reactions implies in gaps in communication between treating clinicians and the blood transfusion services. The gap can be minimized by the regular continuing education regarding recognition of suspected transfusion reactions and the emphasis on the importance of reporting reactions.

Effective Haemovigilance Program

Abstract Author(s):-Neeta Shee

Affiliation:-Nursing sister of Bokaro General Hospital, Blood Center

Background/ Introduction

Blood transfusion service is an important part of our healthcare system. It`s aim is to provide safe, effective blood components for the patient`s requirements.
Haemovigilance is a quality vigilance process with the aim to improve the standard of the blood transfusion chain.
Haemovigilance is a set of surveillance procedures, covering the entire transfusion chain, from the donation processing of blood and it`s components, to their provision and transfusion to patients and their follow-ups.

AIM/ Objectives

Goal of haemovigilance is continuous quality improvement of the transfusion chain through corrective and preventive actions, to improve the donor and patient`s safety, improve transfusion appropriateness and reduce wastage.

Methodology

An effective system of haemovigilance requires traceability of blood and blood products from donors to transfused patients and vice versa. It also involves recognition, investigation and reporting of transfusion- related adverse reactions and events and rigorous management of information related to the transfusion process, with timely feedback to ensure appropriate action.
It should include identification, reporting, investigation and analysis of adverse reactions and events in transfused patients and blood donors as well as incidents in manufacturing processes and eventually, errors and near misses. It should be strongly linked to quality management, triggering corrective and preventive actions when required.

Result

Attending the virtual CME on haemovigilance program organized by NIB, gave me a better understanding on the whole process of haemovigilance.

Conclusion

Few insights of the program are as follows-
a) Staining if donors through strict counselling process.
b) Following methodical process before veinotomy.
c) Correcting clerical errors which adverse reactions can be avoided.

Preparation and Characterization of Solid Dispersion Using Novel Technique

Abstract Author(s):-Mr.Ankur Agrawal

Affiliation:-Shri RNS Institute of Pharmaceutical Science and Technology Gwalior M.P

Background/ Introduction: Pharmacy

AIM/ Objectives

The aim of the present study was to improve the dissolution rate of a poorly water soluble drug, Norfloxacin by mixed hydrotropy solid dispersion. Solid dispersion of various composition were prepared using Sodium Acetate , Sodium Benzoate , Sodium Citrate. Crystallinity of the drug in the solid dispersion was evaluated by differential scanning calorimetry. Norfloxacin was released at a much higher rate from solid dispersion and physical mixture as compared to that as of Norfloxacin faster dissolution was exhibited by mixed hydrotropic of drug and The increase in dissolution rate of the drug may be due to decrease in crystalinity.

Methodology:-*

Selection of hydrotropic agents for norfloxacin:- Twenty five ml of hydrotropic solution was taken in a 50 ml glass bottle and gross weight (including the cap) was noted. Then, few mg (by visual observation) of fine powder of drug was transferred to the bottle. This bottle was shaken vigorously (by hand). Same operation Then again gross weight was noted. From the difference in two readings (of weight), an approximate solubility was determined and solubility enhancement ratios calculated. When the solubility enhancement ratio determined was at least 5, such hydrotropic solution was selected for the drug for further studies. On the basis of the results obtained from the approximate solubility determination study, the following hydrotropes were selected. 1. Sodium benzoate 2. Sodium citrate 3. Sodium acetate

Result:-*

FT-IR study:- FT-IR spectra of pure drug norfloxacin and formulation are shown in figure FT-IR spectrogram of have all the peaks as seen in spectrogram of pure drug.
*Differential scanning calorimetry:- The thermogram of pure norfloxacin showed a sharp peak at 220oC which corresponds to the melting temperature of norfloxacin. The sharpness of the peak indicates crystalline nature of the drug. In the optimized formulation , the peak got disappeared which suggest that the crystallanity of the norfloxacin was decreased in the formulation and the drug might be converted in to its amorphous form. This change in drug from crystalline to amorphous form was resulted in the increased solubility. In vitro dissolution study The In vitro dissolution study was performed in simulated gastric fluid (SGF), pH 1.2. The In vitro dissolution study.

Conclusion

Hydrotropic formulation of norfloxacin with sodium acetate, sodium benzoate and sodium citrate as hydrotropes can be prepared with optimum aqueous solubility and dissolution.

Spectrum of adverse reactions among allogeneic whole blood donors and strategies to adopt: A single centre cross sectional study.

Abstract Author(s):-Dr Nithya M Baiju, Dr Arun V. J., Dr Aboobacker Mohammed Rafi, Dr Ramesh Bhaskaran, Dr Susheela Jacob Innah

Affiliation:-Assistant Professor, Junior Resident, Associate Professor, Associate Professor, Professor, Department of Transfusion Medicine, Jubilee Mission Medical College & Research institute, Thrissur, Kerala, India

Background/Introduction

Hemovigilance is a set of surveillance procedures encompassing the transfusion chain from collection of blood and its components to the follow up of its recipients. National Blood Donor Vigilance Programme was launched on June 13, 2015 to secure and improve donor safety. The HvPI helps to identify trends and make recommendations regarding best practices and interventions which might be required to enhance donor and recipient safety.

AIM/Objectives

The study was aimed to analyse the spectrum of donor adverse reactions among allogeneic whole blood donors donating at blood centre and to formulate strategies to improve donor safety for enhancing donor retention.

Methodology

A cross sectional study was conducted in the department of Immunohematology and Blood transfusion at the tertiary care centre from January 2019 to December 2020 to analyse the spectrum of donor adverse reactions among whole blood donors who were selected as per the national guidelines. Data recorded were reviewed and was analysed using statistical software SPSS 22.

Result

A total of 16308 donations were done at the blood centre during the study period. 97.1% of the total donations were by males.70.4 % of the donations were done by voluntary blood donors. 37.5% of the total donations were contributed by first time donors. The rate of donor adverse reaction was 0.8%. Most commonly encountered donor adverse reaction was generalized donor adverse reaction- vasovagal reaction without loss of consciousness (44%) followed by vasovagal reaction with loss of consciousness less than 60 seconds (39%), nausea (8%), vomiting (3%), hematoma (3%) and delayed bleeding (3%). First time (85/6110), voluntary (78/11484), young donors in the age group 18-30 years (110/126) were significantly prone to adverse reactions. Vasovagal reactions were significantly high in first time young donors (18-30 years) with weight more than 55kg. 74.6% of the reactions happened during the post donation phase. Allergic complications and serious adverse events were not observed.

Conclusion

Reporting on National Donor Vigilance Programme ensures vein to vein safety. Pre donation counselling and post donation counselling needs to be made mandatory. Measures have to be adopted to reduce anxiety amongst the young age first time blood donors who are the potential regular repeat donors. Phlebotomy training should be implemented to all phlebotomy staffs and competency must be assessed. Follow up of donors to ensure his/her wellness will aid in donor retention.

Analysis of grey zone sample testing for Transfusion transmissible infectious disease for blood safety: A retrospective study in a tertiary cancer care centre of north east.

Abstract Author(s):-Dr Ranjita Sarma, Dr Chandana Kalita, Dr Tarali Pathak

Affiliation:-Assistant professor;Medical Officer;Senior Resident

Background/Introduction
Enzyme linked immune sorbent assay test (ELISA)used for donor screening may sometimes give false negative results due to low viral load, recent infection etc. In such cases it is better to consider retesting of sample with optical density lying 10% below the cut off known as the grey zone sample.

AIM/Objectives
The aim of the study is to strengthen the blood transfusion practices in centres where Nucleic acid test(NAT) is still not available.

Methodology
We retrospectively evaluated 10950 donor samples tested by ELISA .All the grey zone samples were retested and the results were analysed.

Result
Out of 10950 blood donors,95 turned out to be in grey zone(78 of HBV,10 of HIV and 7 of HCV).On retesting of grey zone sample by ELISA, positivity rate was nil for HIV,3.8% of HBV and 57.1%for HCV.

Conclusion
In our study, the impact of grey zone sample testing was maximum in HCV, followed by HBV and nil for HIV

Improving Compliance of Donor Adverse Reactions (DARs) reporting to Hemovigilance Program

Abstract Author(s):-Rakesh Dhanya, Amit Sedai, Lalith Parmar, Kumari Ankita, Arpit Vaish, Soumi Dutta, Rajat Kumar Agarwal

Affiliation:-Sankalp India Foundation

Background/Introduction

The National Donor Vigilance Program (DVP) was launched in 2015. Till 2017, 0.24% donor adverse reactions (DARs) were reported. 35% of the 6091 reactions reported were found to be invalid . The rate of DARs reported from earlier studies in India varied from 0.65 - 5.06%. There is an opportunity to improve error free electronic reporting of DARs.

AIM/Objectives

Improving Compliance of DAR submissions by enabling bulk upload of data on Haemo-Vigil/Donor-Vigil

Methodology

The National Institute of Biologicals (NIB) has defined a DAR Reporting Form for reporting DARs through it's Haemo-Vigil/Donor-Vigil Software. Blood Centres(BCs) need to enter information about transfusion reactions as per this reporting form for blood and plasma products after investigating the reactions, documenting the findings, and compiling reports as per the advised formats. The transfusion reaction traceability document also requires to be maintained and updated. Many BCs have adopted Blood Bank Management Systems (BBMS) for data management. The current approach requires the BCs to fill up the forms afresh on the Haemo/Donor-Vigil software, by essentially copy pasting the information which is already captured by competent personnel in the BBMS internal to the them. This process is time consuming, human resource intensive and error prone.
Most BBMS provide option for users to upload their data beside the option to type in data in the forms. Every BBMS can be programmed to validate data and recognize missing fields prior to successful submissions, thereby improving data collection. Adding such an option to Haemo/Donor-Vigil Software would provide a consistent method to receive data from the BBMS records maintained by the BCs with minimal additional effort.

If NIB enables the option for importing hemovigilance data exported from other systems, BCs and BBMS vendors will be encouraged to ensure that record keeping is in-line with the requirements at a national level. BCs can download data from their BBMS in one of the widely accepted lightweight, easily readable, reliable formats like Java Script Object Notation (JSON) or Comma Separated Values (CSV). This data can be uploaded to Hemo-Vigil software through an import interface.

Result

Improving compliance to ensure 90% or more DARs are effectively reported.

Conclusion

Compliance of DARs reporting may be enhanced by providing bulk upload interface in Hemo/Donor-Vigil Software.

Prevalence of Transfusion Transmitted Infections Among Apparently Healthy Blood Donors in Blood Centre ,RIMS, Ranchi in current scenario.

Abstract Author(s):-DR.Sushma Kumari,Associate Professor, Blood Centre, Rajendra Institute of Medical Sciences, Ranchi

Affiliation:-For safe blood transfusion ,it should be mandatory to screen all the blood donors for transfusion transmitted infection ,as physically healthy looking blood donors might be the source of serious infection for the recepient of blood.

Background/Introduction

Apparently healthy blood donors might carry transfusion transmitted infections which might be fatal for the donor himself as well as the recipient later on. With every one unit of blood transfusion there is 1% chance of transmission of TTI. Globally, more than 81 million units of blood are donated each year.

AIM/Objectives

To assess the seroprevalence of transfusion-transmitted infections (TTI) in current scenario among apparently healthy blood donors in Ranchi, India.

Methodology

All blood samples from 01.01.2020 to 31.12.2020 were screened for HIV-I and II (4th generation kit), HBV and HCV (3rd generation kit) by using chemiluminescence technique. (Manufacturer –Abbott, Model- Architect i 1000SR),Syphilis (by Rapid Plasma Reagin Kit), and Malaria antigen both for plasmodium falciparum and plasmodium vivax(by One step, rapid, immunochromatographic test).

Result

On screening of 21,974 blood units for TTIs, 400(1.82%) donors were found positive for one of the TTIs. Highest prevalence was for HCV (201 donors – 0.91%) .This was followed by HBV(152donors - 0.69 %), HIV (36 donors – 0.16%), Malaria (02donors - 0.0091%) and no blood donors were found to be positive for Syphlis.

Conclusion

- Failure to diagnose and treat infection at an early stage results in serious complications and sequelae.
- Each and every donor’s blood unit must be screened for TTI to make a safe blood Transfusion.

Post-vaccination serological experience of SARS-cov-2 IgG antibodies among blood and convalescent plasma donors

Abstract Author(s):-DR NEHA SINGH ,DR RAVISH

Affiliation:-AIIMS PATNA

Background/Introduction:-
Several vaccines have been introduced to the world, e.g. Pfizer, sputnik, covaxine, covishelid, and many more. The vaccine has proven its efficacy and proven to save so many lives which have been threatened by covid -19.in 2019 covid 19 has been bitten this world and declared himself to the pandemic. The above studies have been observed at tertiary care hospitals among blood and convalescent plasma donors.

AIM/Objectives
To, assess the serological experience of SARS-COV-2-IgG antibodies in convalescent plasma, and blood donors

Methodology
All recently recovered COVID-19 patients, who were previously infected with SARS-CoV-2, had a history of vaccination for covid 19 recruited as the sample. Results were interpreted in the VITROS chemiluminescence system.

Result
There were 1489 blood donations and 63 convalescent plasma donations have been done during the above period. Among Blood donors (101) have been experienced with post-vaccination donations. {26} convalescent plasma donors had also a history of vaccination.
Extracted data from all donors, it was observed that a total of 164 donors had shown reactivity of SARS-COV-2-IgG antibodies and another transfusion-transmitted reaction marker (5%). Total serological reactivity of antibodies in all donors was(10%). Serological presence of antibodies among vaccinated donors was (8.1) % .female had the highest response of antibodies comparison to male donors.

Conclusion
The hyperimmune response among CP donors who went under jabs.60% among post-vaccinated blood donors has seen a seropositive immune response where females had a higher index of antibodies concentration comparison to males. A genetic variation would be the leading cause of antibodies response. Educated people had more aware of vaccine participation
Key word- CP-convalescent plasma, PV-post vaccination, HIR-Hyper immune response, SR-Sera reactivity

Implementing Donor Side Hemovigilance in Outdoor Voluntary Blood Donation Drives

Abstract Author(s):-Arpit Vaish, Rakesh Dhanya, Rajat Agarwal

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Background/Introduction

The National Hemovigilance Program introduced donor side hemovigilance in 2015. We share our experience in setting up a process flow for detecting, monitoring, documenting donor adverse reactions (DARs) in outdoor voluntary blood donation (VBDs) drives.

AIM/Objectives

Experience sharing for donor side hemovigilance in outdoor voluntary blood donation drives involving multiple blood banks.

Methodology

Sankalp India Foundation has been conducting outdoor VBDs since 2007. From 1 Jan 2007 to 31 Oct 2021, 1625 VBDs were organized. Each VBD involved one or more blood collection center. We started capturing DARs since Sep 2009, and 3996 (3.36%) DARs were reported for 118,846 units of blood. Our approach involved the following steps

i. Definition of guidelines: Guidelines for detection and classification of DARs defined by involving blood bank medical officers and transfusion experts. The guidelines were in full agreement with national and international guidelines. This was for enforcement among all blood banks invited to VBDs.

ii. Training of blood bank staff and camp coordinators: Training sessions were organized for technical, non-technical staff of blood banks, camp coordinators from Sankalp to detect complications during or after phlebotomy.

iii. Clear space allocation for post donation processes: Every venue for VBD was visited in advance with a pre-defined checklist. Space planning was done such that there is a clear, well segregated area for post donation. This helped in retaining donors at the venue for 15 minutes post phlebotomy, thereby enabling better detection and capture of DARs.

iv. Availability of resources for capturing of information: One employee from Sankalp would be present in the VBD to ensure the availability of all resources for capture of information. Both demographic and medical information would be captured.

v. Follow up in 24 hours: All information about DARs were digitized. The donors who had a DAR would receive a follow up call within 24 hours, and the status would be recorded.

vi. Securing missing information from blood banks: Any missing information in DAR forms were updated by working with the concerned blood bank.

Result

Making donor side hemovigilance a part of VBD Standard Operating Procedures (SOP) helped to detect and record several DARs. Availability of clear records has ensured that DARs are studied in detail and interventions for reducing the same are developed.

Conclusion

Donor side hemovigilance is an integral part of outdoor VBD and must be included as part of the SOP.

Donor vigilance: a step towards blood safety

Abstract Author(s):-Miss. Monali Valera, Dr. Spruha Dholakiya, Dr. Nishith Vachhani, Dr. Sanjiv Nandani

Affiliation:-LIFE BLOOD CENTRE, RAJKOT, GUJARAT

Background/Introduction
Donors are the basic pillars of blood supply chain and main asset for a transfusion unit. Any adverse event during blood donation process may result into de-motivation of a blood donor leading to a negative impact on blood donor return rate.

AIM/Objectives
The following study is done to analyze the type of adverse donor reactions and its frequency in different age groups so as to educate the donor regarding the same.

Methodology
This is a 2-year retrospective study carried out at a stand-alone blood centre in western part of India, enrolled thoroughly with Haemovigilance programme of India. The study assessed the rate of adverse donor reactions for a period of 2 years in both apheresis and WB donations. The Data collection was done from Blood Bank Management System (safetrans) and also from physical record of the documents.

Result
Out of total 22853 whole blood donations and 655 aphaeresis donations, only 2.26% (n=532) [WB+Apheresis] donors had reactions. Out of those 532, maximum adverse reaction happened due to anxiety attacks like vomiting/nausea/sweating/dizziness accounting to 30% (n=162) of adverse reactions. After that, vein slippage/thin veins or needle slippage occurred in 27.2% (n=145). Vaso-vagal syncope to blood donors was noted up to 17.10% (n=91), hematoma and pain at pricking site accounted for 6.01 %(n=32) & 5.63% (n=30) respectively Rest of the reactions happened due to miscellaneous reasons accounting to 13% (n=72).

Out of total 532 donors, 42% (n=226) donors were first time donors and remaining 58% (n= 306) donors had donated at least once before. As we have repeat voluntary donors registered for apheresis, only 1.52% (n=10) had encountered reaction related to citrate toxicity, and was relieved after oral calcium supplementation.

Conclusion
Reporting donor reactions data with extensive parameters under Haemovigilance programme of India has made it mandatory to look into minute details pertaining to donor safety and the process of whole blood and apheresis donation. Unlike other centres where apheresis donations have shown a rise in adverse donor reactions, our centre has a registry for voluntary apheresis donors and hence all of them are very well versed with the collection process and procedures and hence rate of reaction is very less, hence identifying the causes of adverse donor reactions, we were able to manage pre and post donation counselling of the blood donors leading to retention and recruitment of blood donors.

Severe Donor Reaction as A Hazard of Replacement Blood Donation- A Case Report

Abstract Author(s):-Amita Radhakrishnan Nair, Debasish Gupta

Affiliation:-Department of Transfusion Medicine, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram

Background/Introduction
Blood donation is generally considered to be a safe procedure, but occasionally adverse reactions of varying severity may occur. Incidence of adverse donor reaction reported as 0.6 to 5.6%. Delayed reactions account for < 2% of total adverse donor reactions, 27.6% are severe.

AIM/Objectives
We report a case of potentially preventable severe delayed vasovagal reaction in a 56-year-old replacement blood donor.

Methodology
A 56-year-old gentleman, weight 64.4 kg registered as a replacement blood donor for his friend who was undergoing CABG. He had previously donated two years back in middle east country, which was uneventful. He had a good sleep and breakfast and was feeling well. His medical history was uneventful. He did not give any history of any medication or chronic diseases like diabetes or hypertension. Hemoglobin-14.2g/dl. BP-120/86 and PR- 80/minute, regular, normal volume. He was accepted for blood donation and 350 ml blood was collected within 4 minutes, 27 seconds. His blood donation was uneventful and after having light refreshment and hydration, he was thanked for his blood donation with a certificate.
Half an hour later, he was brought into the triage area of our Institute with a history of sudden loss of consciousness and fall. As he had certificate of blood donation in his pocket, we were immediately informed. Donor was immediately resuscitated. he was conscious and oriented. His vitals were stable. He had sustained an abrasion over the head, which was cleaned. CT head demonstrated a fracture of the outer table of skull away from the site of present injury. There was no internal brain injury.

Result
Donor was hydrated and his RBS was 420 mg/dl. When the fact was brought to his attention, he admitted that he had a history of syncopial attack (not related to donation) and fall 3 years back. He did not take any medical consultation at the time and didn't disclose this history at the time of his previous donation. Since the previous blood donation was uneventful, he did not think it important to disclose now also. He was referred to physician for further evaluation of syncopial events and high blood glucose levels.

Conclusion
Donors should be educated about the necessity to disclose all their medical history, to ensure safety of blood donor and recipient. Blood centre along with the hospital administration should have a policy to meet the financial expenses incurred during treatment of donor reactions, because health and safety of blood donor is the responsibility of blood centre.

DONOR ADVERSE REACTION REPORTING- NEED OF THE HOUR

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Affiliation:-B.J.Medical College and Civil Hospital , Ahmedabad

Background/Introduction
Haemovigilance is a set of surveillance procedures covering the whole transfusion chain from the collection of blood and its components to the follow-up of its recipients. The donor vigilance program is intended to collect and assess information on unexpected or undesirable effects or reactions from blood donation.

AIM/Objectives
The aim of this study was to study the incidence of donor adverse reactions (DARs) and report them under the National Blood Donor Vigilance Programme of India.

Methodology
All donor adverse reactions seen in whole blood donors and apheresis donors occurring at the Blood Centre and various blood donation camps of a Tertiatry Care Hospital during the period of one year (September 2020 to August 2021) were analysed. All reactions were recorded in DAR reporting forms prepared and approved by the National Executive Committee of the Haemovigilance Programme of India. The collected data was submitted to Donor-Vigil software on the website of National Institute of Biologicals.

Result
During the period of one year(September 2020 to August 2021) 100 donor adverse reactions (all of whom were male) were noted out of 37,537 donors. The overall DAR rate was found to be 2.66 per 1000 blood donations. Maximum donors with adverse reactions were in the age group of 18 to 30 years.75% of all adverse reactions reported were in first time donors.

Conclusion
In this study, we concluded that younger, first time donors are more prone to DARs as compared to older age, repeat donors. During analysis of the data, we came across certain shortcomings which can be improved by updating the reporting form and conducting regular continuing medical education (CME) for blood centre staff members.

Vasovagal reactions among whole blood donors of a Tertiary Care centre in Northern India

Abstract Author(s):-Rajbir Kaur, Kshitija Mittal, Ravneet Kaur, Tanvi Sood, Paramjit Kaur

Affiliation:-Government Medical College and Hospital, Chandigarh, India

Background/Introduction
Whole blood donation is generally considered a safe procedure; however, a small percentage of donors could develop vasovagal reactions (VVRs) during or after completion of blood donation.

AIM/Objectives
This study was conducted to establish the prevalence of VVRs among whole blood donors in outdoor blood donation camps.

Methodology
This study was conducted in Department of Transfusion Medicine of Government Medical College and Hospital, Chandigarh by retrospective analysis of whole blood donor demographic and blood donation-related information was extracted from department records from January 2020 to October 2021.

Result
Among 25990 whole blood donations, 32 cases of VVRs were reported, resulting in a VVR rate of 0.12%. The factor of young age group, first-time donor and donation performed in outdoor blood donation camp were identified to be associated with development of VVRs. Among these 30 VVRs, 30 were male (93%) donors and 2 (7%) female donors, 19 (59%) first time donors and 13 (40%) repeat donors having age range of 18-52 years. 30 (93%) donors experienced VVR 5-15 minutes post donation and VVR during blood donation was observed in 2 (7%) donors. The most common vasovagal symptoms were dizziness and generalised weakness (87%), followed by anxiety (46%), loss of consciousness <60 seconds (34%), vomiting (0.12%) and cold extremities (0.12%).

Conclusion
Our study reaffirms that blood donation is a relatively safe process, and the incidence of VVRs in the young first time whole blood donors can be further reduced by ensuring strict screening procedure and mandatory blood donor counseling before blood donation in outdoor blood donation camps.

Adverse Donor Reactions During Voluntary blood and blood components donation

Abstract Author(s):-Harpreet Kaur , Neetu Kukar, Anjali Handa , Arashdeep Singh, Navreet Singh

Affiliation:-DEPARTMENT OF IHBT GGSMCH FARIDKOT

Background/Introduction

Donor reaction is defined as the clinical symptoms or signs of donor discomfort severe enough to be noticed by the donor himself or the staff.Donor reaction may occur at pre-donation, during donation or post donation phases. Vasovagal reactions are the most common adverse reaction noted.

AIM/Objectives

Here I am presenting case series(3) of adverse donor reactions,one is of vasovagal reaction during whole blood donation and 2 cases are of severe citrate toxicity at the time of single donor apheresis platelet collection.

Methodology

CASE 1

A 23 year old ,first time female donor donated blood at blood donation camp voluntarily.She left premises 20 minutes post donation,till then she was under observation and refreshment was given there only.Her blood donation was also uneventful.After leaving premises she fell and had severe vasovagal reaction with loss of consciousness for > 60 seconds.Immediate management was initiated and she was taken to hospital for further management and recovered without any sequele.

CASE 2

A case of severe citrate toxicity during single donor apheresis platelet collection was reported. 42-year-old male, regular voluntary donor donated apheresis platelets for fourth time.Every time he was having tingling around mouth but every next time,intensity of reaction was increased and during the fourth time procedure he had swelling around lips and rapidly developed tetany of face and extremities . Empirical treatment with intravenous calcium gluconate was initiated, and donor recovered without sequelae.

CASE 3

A 32 year old male, replacement donor with previous history of 2 whole blood donations was given fitness for plateletpheresis.Procedure was started at 11:20 pm in blood centre, during first return cycle,donor complained of uneasiness and pain abdomen.Procedure was halted and donor was given oral calcium and refreshment of liquids.After a brief pause procedure was reassumed but during third return cycle,donor had tetanic contractions of all four limbs along with loss of consciousness >60 seconds.Donor was shifted to emergency for further management.Donor recovered without sequelae.

Result

Vasovagal reactions are the most common adverse reaction noted in whole blood donations and citrate reaction is most common in single donor apheresis procedures.

Conclusion

An experienced phlebotomy staff and adequate supervision is important to reduce adverse events, especially among first time donors by continuous motivation during donation.

A REVIEW OF POST DONATION FOLLOW-UP OF BLOOD & APHERESIS DONORS DURING THE COVID-19 PANDEMIC

Abstract Author(s):-Abhija Babuji, Pradnya Chavan, Rajesh B Sawant, Varsha Vadera

Affiliation:-Department of Transfusion Medicine, Laboratory medicine Kokilaben Dhirubhai Ambani Hospital

Background/Introduction
Novel corona virus (SARS CoV 2) is a new strain identified from the family of coronaviridae. Covid-19 was declared pandemic by World Health Organisation on 11th March 2020. Various protocols were set and issued by NBTC, SBTC and MoHFW to carry out blood donations safely.

AIM/Objectives
To evaluate outcome of the new protocol for conduct of post donation follow-up of blood and apheresis donors during the Covid-19 pandemic.

Methodology
As per the circular dated 25th March 2020, process for obtaining health status update within 14 days post donation was implemented at our blood centre. Donors were sensitized during pre-donation counseling to report back to the blood centre about any Covid-19 related health conditions in self or close contact upto 14 days post donation. Dedicated and trained staff members contacted donors by telephone on Day3 and Day 14 post donation. In case of any suggestive symptoms of Covid-19 or confirmed Covid-19 infections in donor or their close contact, the concerned components were recalled and discarded. Retrospective analysis of above data from 1st April 2020 to 30th September 2021 was done

Result
During the study period, total donors were 11,389 out of which 11(0.09%) donors reported history of fever or symptoms suggestive of Covid-19. 3/11(27%) donors tested Covid-19 positive, while Covid-19 infection was ruled out in 8/11 donors. Total 27 components were quarantined, of which 13 components were discarded which included 5PRBCs, 6FFPs and 2 platelet concentrates. All 8 components from Covid-19 sero-converted donors were discarded. In four instances, 5 components were already issued to patients before the post donation information from donor was obtained. Recipients of these components were followed up and no adverse outcomes were noted.

Conclusion
Post Donation follow-up of donors could be successfully implemented and it helped to ensure transfusion as well as blood centre staff safety during the pandemic period. This strategy led to minimal additional discard of precious blood components.

A REVIEW OF DONOR HEMOVIGILANCE DATA FROM BLOOD CENTRE AT A TERTIARY CARE HOSPITAL

Abstract Author(s):-Pradnya Chavan, Rajesh B Sawant, Abhija Babuji, Rekha Patil, Varsha Vadera

Affiliation:-Department of Transfusion Medicine, Laboratory medicine, Kokilaben Dhirubhai Ambani Hospital

Background/Introduction
Donor Hemovigilance incorporates capturing adverse reactions in donors and events related to complications of blood donation. Blood donors usually tolerate blood donation very well but occasionally adverse reactions of varied nature can occur.

AIM/Objectives
To understand the donor adverse reactions, their association and to identify any possible gaps in reporting these reactions.

Methodology
Retrospective analysis of hemovigilance data submitted to the National Hemovigilance Programme over a period of 21 months was done. Variables studied included type of reactions, site of donation where reaction occurred and severity of the reactions. Association of donor reactions with factors like donor weight, age, sex, volume of donation was studied. Donor forms, apheresis procedure sheets and incident reports during the study period were reviewed for any missing reaction data.

Result
During the study period, total donors were 13,239, of which 12850(97%) were blood donors and 389(3%) were apheresis donors. 93(0.7%) donors had adverse reactions during or after donation. Adverse reactions in female donors was marginally higher(0.2%) as compared to male donors(0.13%). 90(96.7%) reactions were noted in whole blood donations. All 3 reactions in apheresis donors were related to citrate toxicity. 78(86.7%) reactions were noted in 450ml blood volume donations. 90(96.7%) donor reactions were mild while 3 (3.3%) were moderate in severity. Most common donor adversity noted was vasovagal reactions in 89/93(95.6%) donors while the others included hematoma formation and citrate toxicity. All donor reactions were resolved at donation site itself. The occurrence of donor reactions was more in donors less than 30 years of age(54.8%), donors with body weight more than 70 kgs(51%) and those with hemoglobin value ranging between 12.5g/dl to 14g/dl(46.4%). 22(23.6%) donor reactions were identified upon reviewing the donor data and these were all pertaining to apheresis donation. These included haematoma formation in 15(27.2%) cases, failure to re-infuse blood in 6(27.2%) cases and hypersensitivity to G-CSF injection in granulocyte donor in 1(4.7%) case.

Conclusion
The overall extent of donor adverse reaction is within acceptable limits. Under-reporting of adverse donor reactions in the apheresis setting needs to be addressed with additional training and better surveillance of the concerned staff. Further analysis of factors associated with donor reactions may help us in implementation of various mitigation strategies.

A Retrospective Analysis of Plateletpheresis Donor Deferral in a Tertiary Care Hospital in Northern India

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Background/Introduction
The demand for plateletpheresis is increasing day by day. In our country there is not much awareness about apheresis donation due to lesser availability of apheresis, longer procedure and its complications. The deferral rate in apheresis is more as compared to whole blood donation because it additionally needs some more criterias like good venous access, pre-procedure platelet count >1,50,000/ul, NSAIDS intake, weight, age etc. Plateletpheresis donor deferral need to be investigated as many donors may be temporarily deferred who may donate in future

AIM/Objectives
To analyze the plateletpheresis donor deferral in a tertiary care hospital in Northern India and to apply that knowledge to avoid the preventable causes of deferral

Methodology
Donor Records of single donor apheresis were retrospectively analyzed of last one year (from December 2020 to November 2021). All donors of 18–60 years of age and weighing >50 kg with a platelet count of >150,000/mm were accepted. Donors were selected after screening according to DCA, Amendment 2020 guidelines. Causes of plateletpheresis donor deferral was analysed.

Result
Out of 280 potential apheresis donors screened over the study period of 1 year, 57 (20.35%) donors were deferred. The reasons for deferrals were categorized into permanent and temporary deferrals. Out of the 57 deferrals, 54 (94.7%) deferrals were classified as temporary deferrals. They accounted for majority of the deferrals. There were 3(5.2%) permanent deferrals. The cause for permanent deferrals were 2 (3.5%) known cases of heart disease and 1(1.7%) TTI reactive donor. Poor venous access 22 (38.5%) was the main reason of donor deferral followed by low platelet count 16 (28%), NSAID intake 8 (14%) and COVID vaccine 3 (5.2%), alcohol intake 2(3.5%), inadequate sleep 2(3.5%), RCT procedure 1(1.7%). Among the low platelet count donor group, 3 apheresis donors (18.75%) had a count between 141 - 149 x 10(9)/L and 10 apheresis donors (62%) had counts 130 - 100 x 10(9)/L and 3(18.75%) had counts < 100x10(9)/L.

Conclusion
There is a huge challenge for blood transfusion services to balance between donor acceptability and management of adequate blood inventory. This study showed that the majority of donors were deferred due to poor venous access so they can be counselled for whole blood donation that will be helpful to maintain their altruistic attitude of donation. Reasons of other temporary deferral should also be analysed and donors must be counselled for donation after the deferral period.

A Retrospective analysis of post COVID-19 vaccination deferrals among voluntary blood camp donors and inhouse donors at a tertiary care hospital in Northern India

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Background/Introduction
Emergence of COVID-19 pandemic has taken a huge negative toll in blood transfusion services all over the country. Introduction of massive COVID-19 vaccination drive, NBTC and MoHFW formulated national guidelines for blood donor deferral period of 28 days after vaccination against COVID-19 in January 2021. On 5th May 2021 deferral period for blood donors was reduced to 14 days. This amendment helped to narrow down the shortage in blood supply due to COVID-19 pandemic.

AIM/Objectives
To evaluate and compare post COVID-19 vaccination deferrals among blood donors at voluntary blood camps with inhouse donations at a tertiary care hospital in Himalayan Region of India

Methodology
This study was conducted at Department of Transfusion Medicine, AIIMS Rishikesh. Retrospective data was collected of blood donors registered from 1 January 2021 to 16 November 2021 who were deferred in view of post COVID-19 vaccination. Blood donors were grouped into two categories, inhouse and outdoor blood camp donors. Post COVID-19 vaccination deferrals in blood donors at voluntary blood camps organized by the hospital following the standard safety protocols and social distancing norms, were compared with post COVID-19 vaccination deferrals among inhouse donations.

Result
A total of 18,323 potential blood donors were registered and screened according to DCA, Amendment 2020 . 34 voluntary blood camps were organized where 2,618 voluntary blood donors were registered, out of which 513 donors were deferred that comprised of 19% of the donors deferred out of registered donors. Out of deferred donors 6.62% of the donors were deferred due to COVID-19 vaccination.

At inhouse blood centre 15,705 blood donors were registered, out of which 2937 donors were deferred that comprised of 18% of the donors deferred. Out of deferred donors 9.2% of the donors were deferred due to COVID-19 vaccination.

Maximum COVID-19 vaccination deferrals were in September 2021 in outdoor voluntary camps and in August 2021 at in house donors.

Conclusion
This study shows that COVID-19 vaccination emerged as one of the major causes of donor deferral. Prior information was given regarding COVID-19 vaccination to blood camp organizers which led to less deferral in camps. Various studies shows knowledge, attitude and practice about blood donation, better in voluntary donors in camps as compared to replacement donors. In this study, majority of inhouse donors were replacement donors and it can be hypothesized that they were unaware of COVID-19 deferral period.

The haemovigilance: the best quality management system of the transfusion chain

Abstract Author(s):-Kanchan Manik Barle

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Background/Introduction
Haemovigilance is a relatively procedure of tramfu- sion in the world, and is indispensable to the safety and quality of blood transfusions. Haemovigilance has covered integrul aspects of the safety. haemovigitance was a system which intended to assess and collect the informa- tion on the undesirable and unexpected effects resuiting from the collection and use of blood products, and to pre- Haemovigilance is a relatively new procedure of tramfu- sion in the world, and is indispensable to the safety and quality of blood transfusions. After two decades, It has gruwn lnto a worldwide network which observes, records, collects, reports, monitors, evaluate and analyzes.

AIM/Objectives
Haemovigilance is an integral part of blood safety Many harmovigilance systems are already in place or are develaping and national or regional haemovigilance systems have been implemented in sev- craf countries. In 2016, the WHO Global Database on Blood Safety reported that national haemovigilance system had been established in 70 countries, among which 38 countries were members of the International Haemovigilance Network by the end of August 2017. In this teview, we retrospect the development and current status of haemovigilance to outline its function in transfusion chain. Materials and Methods Through contrasting the eyolution of haemovigilance definition in different periods, by analysing its scope and breadth, and with the illustrating its achievements and challenges, we retrospect the developnient and current status of haemovigilance to outline its function in transfusion chain.

Methodology
Through contrasting the eyolution of haemovigilance definition in different periods, by analysing its scope and breadth, and with the illustrating its achievements and challenges, we retrospect the developnient and current status of haemovigilance to outline its function in transfusion chain.

Result
Haemovigilance is hecoming an important aspect of transfusion medicine. could be used as quality indicator for monitoring the blood transfusion safety, contribute significantly to evidence-based transfusion medicine and results in improved policies, procedures and practices in the blood transfusion chain.

Conclusion
The scope of haemovigitance may cover the whole transfusion chain, From collection af blood and its components to follow-up of recipients. Harmovig- itance is an essential componemnt of quality management in a blood system and haemovigilance is the best quality chain.

DIAGNOSIS AND MANAGEMENT OF ARTERIO-VENOUS FISTULA IN A VOLUNTARY BLOOD DONOR IN A TERTIARY CARE CENTRE

Abstract Author(s):-PRESENTING AUTHOR:DR.SHANTHINI GILDA V CO AUTHOR:G.SARANYA,A.RUTH JENILA,M.SINTHA.

Affiliation:-The Tamil Nadu Dr.M.G.R. Medical University.

Background/Introduction
Blood donation process is usually safe and uncomplicated, occasionally donor experience adverse reactions during or after donation.Donor safety is an essential prerequisite to increase number of donors and so also retention of donors. Arterio-venous Fistula is local symptoms under major vessel injury.

AIM/Objectives
Proper post donation advice should be given to donors about donor reaction,if any symptoms persist should consult blood bank /consult doctor.
Well trained the personnel in the phlebotomy area about phlebotomy procedure and to respond quickly to donor reaction.

Methodology
20years old male referred from peripheral blood centre to our tertiary care centre with complaints of swelling in the right antecubital fossa at phlebotomy site for past 2 weeks.History of blood donation 3 week back.On the day of blood donation there was no swelling or pain at the venepuncture site. Donor referred to surgeon for expert opinion.Routine investigations along with ultrasound and Doppler of right arm was done.

Result
Doppler impression suggestive of Arterio-venous Fistula.Vascular surgeon opinion obtained adviced surgical intervention.Arteriovenous Fistula Repair done for donor by vascular surgeon.Operative and postoperative period was uneventful.Donor discharge 1 week after Arteriovenous Fistula Repair.At present donor is in good health.

Conclusion
Arteriovenous fistula is a rare type localized donor reaction.Proper preparation of phlebotomy site,Proper technique of phlebotomy procedure must be followed.Manipulation of the needle after prick should be strictly avoided. Donor reaction has the most negative impact on the blood donor retention.Amelioration of some adverse events has the potential to improve blood donor retention.

ADVERSE DONOR REACTION IN HEALTHY DONORS AT TERTIARY CARE CENTER

Abstract Author(s):-DR BHOOMIKA SHINGALA1,DR KRISHNA MAYANI2,DR JITENDRA VACHHANI3 (1.2ND YR RESIDENT,2.3RD YR RESIDENT,3.PROFESSOR & HEAD)

Affiliation:-DEPARTMENT OF IHBT, SHREE M.P.SHAH GOV.MEDICAL COLLEGE, JAMNAGAR, GUJARAT, INDIA

Background/Introduction
Majority of donors tolerate the withdrawal of a unit of blood without event. However unwanted effects have a negative impact on donors .This events are multifactorial in origin and occurs during or after the donation.

AIM/Objectives
To Identify and prevent occurrence of transfusion related unwanted events, in order to increase the safety ,efficacy and effciency if blood transfusion.

Methodology
This is a retrospective study of 9 months (from August 2020 to April 2021) in whole blood and apheresis donors at our hospital. Donor selection is done according our standardized operative procedure.

Result
A Total 16790 blood donors were seen in this period,16345 (97.27%) males and 445 (2.65%) females. Out of 16560,5041 First time donors and 11737 repeated donors. Incidence rate of adverse donor reaction was 0.75% at our center

Conclusion
Most common adverse donor reaction was vasovegal reaction followed by hematoma.

Observational study to assess the adverse events post blood donation in a tertiary care hospital in eastern India.

Abstract Author(s):-Dr. Rathindra Nath Biswas, Dona Chakraborty

Affiliation:-Department of Transfusion medicine, Chittaranjan National Cancer Institute,Kolkata

Background/Introduction
Blood donation procedure involves certain adverse events which are experienced in fewer individuals and hence, unfortunately, less reported in the Indian scenario. The most common side effects observed are mild to moderate vasovagal reaction, weakness, uneasiness, fatigue, hematoma, sore arm, numbness.

AIM/Objectives
We intended to study the adverse events experienced over a span of one year among donors coming to the blood Centre for donation.

Methodology
In a retrospective study donors coming from May 2020 to April 2021, voluntary blood donation was done and post donation adverse events were noticed. The sample size was categorized under three groups depending on age: 18-30 years, 31-44 years and 45 years. The reactions were classified as: localised reaction such as hematoma, sore arm, numbness and systemic reactions including mild to moderate vasovagal reaction, weakness, uneasiness, fatigue. Fifteen days following their donation they were interviewed by telecommunication and their experiences were assessed.

Result
In total, 6554 (93.36%) voluntaries have donated whole blood, 322(4.59%) plasma from apheresis and 144(2.05%) were donors of single donor platelet apheresis.The mean weight of the donor in 31-44 years age group higher than others groups.Young donor 18-30 years group showed higher mild to moderate systemic reactions where above 45 years experienced low systemic reactions. Female donors had higher adverse reaction 1.65% .On 15 days follow-up, 2 volunteers of 18-25 years complained of hematoma phlebotomy site and one donor had reddish discoloration of dependent part of elbow but no hematoma was found. Five donors of all age groups complained of mild persisting tingling sensation of hands following donation. Two volunteers also complained of mild symptoms the day after donation which resolved consequently.We observed 10 adverse reactions following fifteen days follow-up due to COVID'19 pandemic which was usually unreported previously.

Conclusion
Donor adverse events are observed very less but needs reporting. During our study we observed certain volunteers complaining of mild adverse effects the day after donation which is not reported due to no post donation follow-up.

ANNEXURE 1- PROGRAM SCHEDULE

3-6 PM	**Day 1 (09.12.2021)**	**National Haemovigilance Programme**	
	3:00-3:40	**Inaugural Ceremony** 1. **Welcome address** by Dr. Anup Anvikar, Director, NIB, NOIDA 2. **Address** by Dr. Rajeev Singh Raghuvanshi, Secretary-cum-Scientific Director, IPC, Ghaziabad 3. **Address** by Dr. V. G. Somani, Drugs Controller General (I), CDSCO, New Delhi 4. **Address** by Dr. Mandeep Kumar Bhandari, Joint Secretary (R), Ministry of Health & Family Welfare, Government of India 5. **Address** by Shri. Rajesh Bhushan, Secretary, Ministry of Health & Family Welfare, Government of India 6. **Address by the Chief Guest:-**Dr. Mansukh Mandaviya, Hon'ble Union Health Minister, Ministry of Health & Family Welfare, Government of India 7. **Vote of Thanks** by Dr. Akanksha Bisht, Scientist Grade- II & Head- HvPI, NIB, NOIDA	
3:40 -6:00 PM			**Speakers**
Session 1			
Chairpersons		1. Dr. Neelam Marwaha, Chairperson-National Executive Committee, HvPI	
	3:40-4:00	Blood Transfusion Service (BTS) and Hemovigilance in South East Asia Region of WHO	Dr. Aparna Singh Shah, Regional office for South East Asia, World Health Organization
	4:00-4:20	Haemovigilance Programme of India- An Update	Dr. Akanksha Bisht, NIB, NOIDA
	4:20- 4:40	Near Misses in Sample collection and in blood component transfusion: Indian Scenario	Dr. Debasish Gupta, SCTIMST, Thiruvananthapuram
	4:40-5:00	Role of accreditation in improving quality of Haemovigilance data	Dr. Sadhana Mangwana, Sri Balaji Action Medical Institute, New Delhi
	5:00-5:20	Q/A Session	
Session 2			
Chairpersons		1. Dr. C. Shivaram, Manipal Hospital, Bangalore	
	5:20-5:40	Debate: Should Reporting under Haemovigilance Programme of India Mandatory/ Voluntary	1. Dr. Somnath Mukherjee, AIIMS, Bhubaneswar 2. Dr. Gita Negi, AIIMS, Rishikesh
	5:40-6:00	Q/A Session	

3-6 PM	Day 2 (10.12.2021)	Donor Haemovigilance	Speakers
Session 1			
Chairpersons		1. Dr. Jayashree Sharma, Seth GS Medical College & KEM Hospital, Mumbai 2. Dr. Nidhi Bhatnagar, B.J. Medical College, Ahmedabad	
	3:00-3:20	Donor Vigilance in India: Experience of initial two years of implementation	Dr. Gopal Patidar, AIIMS, New Delhi
	3:20-3:40	Vaso Vagal Reactions: How to prevent them?	Dr. Aseem Tiwari, Medanta-The Medicity Hospital, Gurugram
	3:40-4:00	Delayed & Long Terms effects on Blood Donors: Are we missing the vulnerable	Dr. Shamee Shastry, Kasturba Medical College, Manipal University, Manipal
	4:00-4:20	Severity Grading Tool and Imputability assessment for Adverse Donor Reactions	Dr. Satyam Arora, Post Graduate Institute of Child Health (PGICH), NOIDA
	4:20-4:40	Q/A Session	
Session 2			
Chairpersons		1. Dr. Sitalakshmi S, St. John's Medical College Hospital, Bangalore 2. Dr. V. Kalaiselvan, Senior Principal Scientific Officer, Indian Pharmacopoeia Commission, Ghaziabad	
	4:40-5:00	Debate: Donor's centric access to adverse events reporting vs blood centre's reporting system at present	1. Dr. Prasun Bhattacharya, Medical College Hospital, Kolkata 2. Dr. Poonam Shrivastava, Lions Blood Bank, Shalimar Bagh, New Delhi
	5:00-5:20	Q/A Session	
Session 3			
Chairpersons		1. Dr. Nabajyoti Choudhury, Health City Hospital, Guwahati 2. Dr. Gajendra Gupta, Santokba Durlabhji Memorial Hospital, Jaipur	
	5:20-6:00	Selected Abstract presentation (Duration of each abstract will be 8 minutes + 2 minutes for questions)	

3-6 PM	Day 3 (11.12.2021)	Recipient Haemovigilance	Speakers
Session 1			
Chairpersons		1. Dr. Vinod Kumar Panicker, Saveetha Medical College & Hospital, Chennai	
	3:00-3:20	Recipient Haemovigilance in India: 5 years' experience	Dr. Ravneet Kaur, Government Medical College and Hospital, Chandigarh
	3:20-3:48	Haemovigilance Nurse: A unique initiative (7 mins to each 4 blood centres for sharing their experience who have initiated the concept of Hv. Nurse at their blood centres)	1. Dr. Hari Krishan Dhawan, PGIMER, Chandigarh 2. Dr. Dheeraj Khetan, SGPGIMS, Lucknow 3. Dr. Kalpana Velaskar, SRCC - Narayana Hospital, Mumbai 4. Dr. Ram Mohan Jaiswal, Mahatma Gandhi Medical College, Jaipur
	3:48-4:10	Q/A Session	
Session 2			
Chairpersons		1. Dr. Ratti Ram Sharma, PGIMER, Chandigarh 2. Dr. R. N. Makroo, Medeor Hospital, New Delhi	
	4:10-4:30	Transfusion Reactions involving the Pulmonary Symptoms	Dr. Naveen Agnihotri, Nayati Medicity, Mathura
	4:30-4:50	Transfusion Reactions in Neonatal and Paediatric group of patients	Dr. Abhishek B, JIPMER, Puducherry
	4:50-5:10	Importance of Haemovigilance: Clinicians' View	Dr. Padmaja Samant, Seth GS Medical College & KEM Hospital, Mumbai
	5:10-5:20	Q/A Session	
Session 3			
Chairpersons		1. Dr. Meenu Bajpai, Institute of Liver & Biliary Sciences, New Delhi 2. Dr. Sangeeta Pathak, Max Superspeciality Hospital, Saket, New Delhi	
	5:20-6:00	Selected Abstract presentation (Duration of each abstract will be 8 minutes + 2 minutes for questions)	

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