

Utilization of blood and its components at a tertiary care hospital in Pakistan

Nadia Altaf¹, Shahtaj Khan¹, Afzal Shah¹, Muhammad Idrees², Rashid Azeem³,
Muhammad Waqas⁴

¹. Hayatabad Medical Complex, Peshawar – Pakistan, ². KMC Peshawar – Pakistan, ³. NWSM Peshawar – Pakistan, ⁴. KCD Peshawar – Pakistan

ABSTRACT

Statement of the Problem: Audit of blood usage allows in effective control of blood inventory to satisfy present and destiny demands. However, there has been no preceding audit of utilization of blood and its additives in our province of Pakistan, consequently we determine to conduct audit of blood and its additives in numerous departments of the sanatorium after which to develop strategies that will result in premiere therapeutic utilization of blood and its components with maximum clinical benefits to the patient. **Methodology:** A retrospective audit become carried out in Blood Bank at a Tertiary Care Hospital of Pakistan from January 2017 to December 2017. Included all consecutive patients who had been admitted and acquired blood additives transfusion in inpatient, emergency and ICU Departments. All transfusions included in this look at were allogenic. Children registered in thalassemia center receiving transfusions were excluded from the take a look at. The frequency of entire blood, packed crimson blood cells, clean frozen plasma and platelet utilization became calculated. **Findings:** In our examine a complete of 28963 blood and its components have been applied for inpatients at Tertiary Care Hospital. Whole blood transfusions (41%) have been done most accompanied through packed crimson blood cells (25%). Male sufferers (57.5%) had received most transfusions as compared to females (42.4%). Most blood transfusions have been seen in the age group of 20-50 years. The clinical area of expertise which required high price of usage of blood and its components become medicine (23.3%). Maximum RBC transfusions were

prescribed with the aid of gynaecology and obstetrics (23.8%) whilst highest platelets and FFPs transfusions had been visible with the aid of medicine (43.1%) and gynaecology & obstetrics (23.1%) respectively. **Conclusion & Significance:** The high charge of usage of blood and its components in our observe reinforces the significance of justified use of blood and its additives inside the clinical exercise through implementation of tips of use of diverse blood products to satisfy demands.

Key Words: Utilization, Blood, Components, Transfusion, RBC, Plasma, Platelet

INTRODUCTION:

Blood banking is a swiftly progressing department of clinical technology which has pivotal significance in vouching the safe deliver of blood. It wishes to be monitored and audited periodically to see tendencies of usage of blood additives.¹ Evidence primarily based transfusion guidelines advocate that specific blood components are used to correct precise deficiencies.

In modern-day clinical and surgical exercise a blood transfusion serves as a important lifestyles saving procedure.⁷ Balancing supply and call for is specifically hard when products are perishable. Overstocking blood merchandise is wasteful because of scarcity storage duration and decreases availability for patients in our health facility that rely upon a common blood supply. However it as superb problem to have limited deliver of blood products for life saving therapy.¹ Rational use of blood implies that the proper blood product is to take delivery of to the affected person when wished and in the right amount.

METHODS & MATERIALS:

A retrospective audit became finished in Blood Bank at a Tertiary Care Hospital of Pakistan from January 2017 to December 2017. Included all consecutive patients who had been admitted and received blood additives transfusion in inpatient, emergency and ICU departments. All transfusions covered in this take a look at had been allogenic. Children registered in thalassemia middle receiving transfusions have been excluded from the examine. The frequency of complete blood, packed crimson blood cell, fresh frozen plasma and platelet usage modified into calculated.

Study Strategy:

Observational look at piloted in Blood Bank Department of a tertiary care clinic in Pakistan over a retro of 1 year from January 2017 to December 2017.

Study Inhabitants:

Included all consecutive sufferers who had been admitted and acquired blood additives transfusion in inpatient, emergency and ICU departments. All transfusion included in this study had been allogenic. Children registered in thalassemia center receiving transfusions were excluded from the take a look at. The frequency of complete blood, packed pink cells, fresh frozen plasma and platelet utilization became calculated.

Data Pool:

The requisition paperwork for blood and its components and blood bank problem registers had been analyzed to obtain facts about the whole number of numerous blood additives issued consisting of patient details full name, age, gender, department of admission, specific health center identification quantity, mattress range, indication and total quantity of gadgets issued. Data became analyzed the usage of software SPSS version 20. Frequencies and percentages had been calculated for specific variables like gender, age groups, devices of blood and its components

RESULTS:

During the have a look at period 28963 total quantity of blood and its components had been issued to be used to inpatients admitted at our hospital. Figure 1 indicates that whole blood (41%) was most often used accompanied by way of Packed red blood cells (25%) and then Platelets (23%) and FFPs (11%). Figure 2 indicates maximum of the blood transfusions at some stage in the look at length were not unusual in males (57.5%) than in females (42.4). Figure 3 suggests most of the blood transfusions have been inside the age institution of 18-50 years. Figure 4 indicates most transfusions had been done by way of speciality of Medicine (23.2%) accompanied by way of Gynaecology and Obstetrics (18.8%) and Pediatrics (12.2%) ward. Table 1 shows the very best number of entire blood and packed red blood cell transfusion episodes have been from Gynaecology and Obstetrics unit observed via Medicine and Surgery.

DISCUSSION:

The energy of my studies is that we audit the frequency of usage of blood and its additives in northern Pakistan where previous no audit became done. It diagnosed high price of usage of blood and its components. Therefore there's aggressive need to have strict clinical governance by physicians alongside external great tests to change health practitioner behavior in ordering needless transfusions. It's an hour of need to broaden blood control software which recognition on implementation of evidence based totally transfusion tips reducing needless prices to clinic and sufferers. However obstacle to transfusion audit changed into a terrible documentation.

CONCLUSION:

This study diagnosed high fee of usage of blood and its additives and highlights terrible transfusion practices and shortage of implementation of tips. It additionally reinforces implementation of blood audit in medical setting. Judicious implementation of recommendations of blood transfusion may help to lower high rate of utilization of blood and its components, additionally minimizing risks of transfusion and fitness care fee and

boom availability of blood for patients at the proper time because of restrained resource.