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Move forward to blood safety in Blood Transfusion Centre

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Introduction: Safety of blood components considers the relative freedom from harmful effect to patients, directly or indirectly, of a prudently administered product taking into account the character of the product and the condition of the recipient at the time of the transfusion. To assure blood component safety, several measures are taken into consideration during product manufacturing and storage. Additionally, testing for infectious agents, including viruses, bacteria, and parasites, is routinely or seasonally performed by different blood operator. Transfusion of blood products carries certain inherent risks and hence it should be undertaken only if it improves patient outcome. Our blood transfusion center tries to produce high-quality blood components to increase every year for an added safety to the patients. This study aimed to compare the trends of using blood components in patients and blood components production of our agency.

Study Design and Methods: The studies were conducted from 2015-2017, on the use of blood components in patients and blood components production trends of our agency. The data collection by excel. The mean and standard distribution results were compared by Chi-Square test with red blood cell concentrates (Leukocyte-poor red blood cells: LPRC, packed red blood cells: PRC) and plasma (fresh frozen plasma: FFP, frozen plasma: FP, cryo-removed plasma: CRP) in each year.

Results: Production units of blood components, LPRC equal 12980, 15368, 13683 (46.85%, 49.82%, 52.22%) and PRC equal 14725, 15480, 12523 (53.15%, 50.18%, 47.79%), respectively. Plasma production units were, FFP equal 27921, 28597, 24924(84.45%, 81.17%, 73.74%), FP (include CRP) equal 5143, 6636, 8875 (15.56%, 18.83%, 26.26%), respectively. The subscription requests for blood components in patients since 2015-2017 were 34625, 34810 and 32177, respectively. The use of blood components were, LPRC equal 14193, 15428, 14549(50.74%, 53.26%, 56.37%), PRC equal 13778, 13542, 11259 (46.26%, 46.74%, 43.63%), FFP equal 16390, 15712, 13893 (86.74%, 89.09%, 88.69%), FP (include CRP) equal 2506, 1924, 1771 (13.26%, 10.91%, 11.31%), respectively.

Conclusion: Trend of using the LPRC in patients has increased, while the PRC has decreased all over three years with significant statistically ($p<0.05$), consistent with the production of blood components. FFP production rates decline every year with statistical significance ($p<0.05$), but the rate of using in patients increased, while the rate of FP and CRP reduction, which does not correspond to production rates.

Biography

Jongkol Akahat has completed her MSc (Clinical Pathology), BSc (Med. Tech) from Mahidol and Khon Kaen University, respectively. She is a medical technician specialist in all blood transfusion science; HLA, genotyping, serology, etc. At present, her position is the head of blood components preparation in Blood Transfusion Centre, Faculty of Medicine, Khon Kaen University, Thailand.

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