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Editorial

Adverse Transfusion Reactions in Bangladesh: An Ongoing Patient Safety Imperative

Blood transfusion is a cornerstone of modern healthcare in Bangladesh, supporting essential services such as maternal care, trauma management, treatment of hematological disorders, and major surgical interventions.[1,2] As the demand for blood and blood components continues to rise, ensuring transfusion safety-particularly through the prevention and effective management of adverse transfusion reactions (ATRs) remains a critical clinical and public health priority.[1]

Adverse transfusion reactions range from mild febrile and allergic responses to severe and potentially fatal complications, including acute hemolytic transfusion reactions, transfusion-related acute lung injury (TRALI), and transfusion-associated circulatory overload (TACO).[3-5] In Bangladesh, variations in transfusion practices, resource limitations, and inconsistent monitoring systems may affect both the recognition and reporting of these reactions. Evidence from global haemovigilance systems suggests that a substantial proportion of ATRs are preventable, often resulting from errors in patient identification, blood component handling, or bedside administration.[6,7]

Strengthening haemovigilance systems is central to improving transfusion safety. Despite the availability of reporting mechanisms, underreporting of ATRs remains a persistent challenge, particularly in low-and middle-income countries.[6] Establishing a non-punitive reporting culture supported by strong institutional leadership is essential for generating reliable data and guiding quality improvement initiatives.[3] Haemovigilance should be viewed as an integral component of clinical governance rather than merely a regulatory requirement.

Ongoing education and training for healthcare professionals involved in transfusion practice are equally important. Integrating transfusion medicine and haemovigilance into undergraduate and postgraduate medical curricula can promote sustained improvements in clinical competence and patient safety awareness.[3] In parallel, the implementation of patient blood management strategies is especially relevant in the Bangladeshi context, encouraging judicious use of blood products while reducing unnecessary exposure to transfusion-related risks.[8]

In conclusion, adverse transfusion reactions represent a significant yet largely preventable patient safety concern in Bangladesh. Addressing this challenge requires a coordinated academic, institutional, and national approach to strengthen haemovigilance, promote education, and embed patient blood management principles into routine clinical practice, ensuring that transfusion therapy remains both safe and effective.[1,2,6,8]

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