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Attitude and practices of blood products transfusion in oncological surgeries: A comprehensive analysis

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Abstract

Objective: This study aimed to analyze the attitudes and practices of healthcare professionals regarding blood product transfusion in oncological surgeries, focusing on factors influencing decision-making and adherence to transfusion protocols.

Methods: A mixed-methods approach was employed, consisting of a structured questionnaire survey and semi-structured interviews conducted among surgeons, anesthesiologists, nurses, and transfusion medicine specialists involved in oncological surgeries. The survey assessed demographic characteristics, attitudes toward transfusion, adherence to transfusion guidelines, and perceived barriers to optimal transfusion practices. Interviews provided deeper insights into participants' experiences, beliefs, and decision-making processes regarding blood transfusion in oncological settings.

Results: Out of 80 patients, 23 patients had intraoperative blood transfusions (28.75%), while 25 patients had intraoperative blood transfusions (31.25%), with a majority of the blood transfusions done in patients having increased operative time.

Conclusion: The analysis reveals varying rates of intraoperative blood transfusion across different durations of procedures. Notably, shorter durations generally correlate with lower proportions of intraoperative blood transfusion, while longer durations, specifically 5-hour procedures, exhibit higher rates. The analysis also demonstrates varied rates of postoperative blood transfusion across different durations of procedures

Keywords: Blood transfusion; Oncological surgeries; Transfusion complications.

Introduction

Oncological surgeries often pose unique challenges, including the potential need for blood product transfusion due to intraoperative blood loss [1-3]. Understanding the attitudes and practices surrounding blood transfusion in the context of cancer surgeries is imperative for optimizing patient care and outcomes [4-6]. While blood transfusion is common in surgical settings, the oncological population may have distinct requirements and considerations [7-10]. This study seeks to explore the attitudes of healthcare professionals towards blood transfusion in oncological surgeries, the factors influencing transfusion decisions, and the impact on patient outcomes.

Blood transfusion plays a vital role in managing perioperative bleeding and ensuring favorable outcomes for patients undergoing oncological surgeries. However, the approach to blood product transfusion in this context is multifaceted and

influenced by various factors, including clinician attitudes, institutional protocols, and patient-specific considerations. Understanding the attitudes and practices of healthcare professionals involved in oncological surgeries regarding blood transfusion is crucial for optimizing patient care and resource utilization. This comprehensive analysis aims to delve into the complexities surrounding blood product transfusion in oncological surgeries, examining the diverse perspectives of clinicians and identifying potential areas for improvement in transfusion practices. By shedding light on the intricacies of transfusion decision-making, this research seeks to pave the way for evidence-based strategies that enhance patient outcomes and promote prudent transfusion management in oncological surgical settings.

The administration of blood products during oncological surgeries is a critical aspect of patient care, aimed at managing perioperative bleeding and optimizing patient outcomes. However, the attitudes and practices surrounding blood transfusion in this context vary widely among healthcare professionals, influenced by factors such as patient characteristics, surgical complexity, and institutional guidelines. Understanding these dynamics is essential for ensuring judicious transfusion practices that balance the benefits of maintaining hemostasis with the risks of transfusion-related complications. This comprehensive analysis seeks to explore the diverse perspectives of healthcare professionals involved in oncological surgeries regarding blood product transfusion, aiming to identify barriers to adherence to transfusion guidelines and opportunities for improving transfusion practices in this specialized clinical setting. By elucidating the complex interplay of factors influencing transfusion decisions, this research aims to inform evidence-based strategies for optimizing transfusion management and enhancing patient care outcomes in oncological surgeries.

Methodology

Study design: This research employs a mixed-methods approach, incorporating surveys, interviews, and a retrospective analysis of clinical records. The aim was to capture both quantitative data on transfusion practices and qualitative insights into the underlying attitudes of healthcare professionals.

Participants: Healthcare professionals involved in oncological surgeries, including surgeons, anesthesiologists, and transfusion specialists, were invited to participate. Patient records from oncological surgeries with documented transfusion events were included in the analysis.

Attitudes towards blood transfusion

Survey instrument: A structured survey designed to assess healthcare professionals' attitudes toward blood transfusion in oncological surgeries, addressing factors such as perceived necessity, concerns, and adherence to transfusion guidelines.

Qualitative interviews: In-depth interviews with a subset of participants provided qualitative insights into the nuanced attitudes and decision-making processes surrounding blood transfusion in the oncological context.

Transfusion practices in oncological surgeries

Retrospective data analysis: Clinical records of patients undergoing oncological surgeries with documented transfusion events were retrospectively analyzed. Parameters such as transfusion volume, timing, and patient outcomes were examined.

Adherence to guidelines: This study assessed the extent to which healthcare professionals adhere to established transfusion guidelines in the oncological setting, exploring variations and potential areas for improvement.

Impact on patient outcomes

Complications and Morbidity: The study analyzed postoperative complications and morbidity associated with blood transfusion in oncological surgeries, aiming to identify potential correlations and areas for improvement in transfusion practices.

Results

Out of 80 patients, 23 had intraoperative blood transfusions (28.75%), while 25 had intraoperative blood transfusions (31.25%), with most of the blood transfusions done in patients with increased operative time. Patients having estimated blood loss of approximately 800 ml or above considered to having blood transfusion (either preoperative or postoperative). Out of all the patients having blood transfusions, five patients had transfusion reactions post-operatively.

Discussion

The study critically analyzed the findings, considering the implications for clinical decision-making, patient safety, and the refinement of transfusion protocols in oncological surgeries. The article proposed avenues for future research, including prospective studies and interventions to optimize blood transfusion practices in the oncological setting [11-14].

Further exploration into the nuanced factors influencing transfusion decisions in oncological surgeries could yield valuable insights. Future research could delve deeper into the role of patient-specific variables in guiding transfusion practices, such as tumor type, stage, and preoperative hematologic parameters. Understanding how these factors interact with surgical complexity and intraoperative hemostasis could inform the development of predictive models or decision support tools to optimize transfusion strategies tailored to individual patient profiles.

Additionally, investigating the impact of transfusion practices on clinical outcomes, such as postoperative complications, length of hospital stay, and long-term survival, would provide evidence of the effectiveness of current transfusion protocols. Longitudinal studies tracking patient outcomes following different transfusion approaches could help identify best practices for improving both short-term and long-term clinical outcomes in oncological surgery patients.

Furthermore, exploring the perspectives of patients and their families regarding blood transfusion in oncological surgeries could offer valuable insights into the psychosocial dimensions of transfusion decision-making. Understanding patient preferences, values, and perceptions related to transfusion could help clinicians better engage patients in shared decision-making processes and tailor transfusion strategies to align with patient-centered care principles.

Finally, given the evolving landscape of transfusion medi-

cine and advancements in blood product alternatives, such as hemostatic agents, synthetic hemoglobin-based oxygen carriers, and cell salvage techniques, future research could evaluate the feasibility and efficacy of integrating these modalities into transfusion protocols for oncological surgeries. Comparative effectiveness studies evaluating traditional blood transfusion approaches versus emerging blood conservation strategies could inform evidence-based recommendations for optimizing transfusion practices and minimizing transfusion-related risks in oncological surgery patients.

In summary, continued research efforts aimed at understanding the complex interplay of factors influencing blood product transfusion in oncological surgeries are essential for advancing clinical practice and improving patient outcomes in this critical clinical context. By addressing knowledge gaps, identifying barriers to optimal transfusion practices, and exploring innovative approaches to transfusion management, healthcare professionals can enhance the quality of care for patients undergoing oncological surgeries while minimizing transfusion-related risks and resource utilization.

Conclusion

The analysis reveals varying rates of intraoperative blood transfusion across different durations of procedures. Notably, shorter durations generally correlate with lower proportions of intraoperative blood transfusion, while longer durations, specifically 5-hour procedures, exhibit higher rates. The analysis also demonstrates varied rates of postoperative blood transfusion across different durations of procedures. Notably, shorter durations generally exhibit lower proportions of postoperative blood transfusion, while longer durations, particularly 5-hour procedures, show higher rates. This research contributes valuable insights into the attitudes and practices of blood product transfusion in the context of oncological surgeries. By comprehensively examining healthcare professionals' perspectives and analyzing transfusion outcomes, the study aims to inform evidence-based practices and enhance patient care in this critical surgical domain.

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