

Determine the Prevalence and Factors Associated with Preoperative Anemia among Adult Patients Scheduled for Major Elective Surgery

Saeed Pourhassan*

Department of Internal Medicine, Shariati Hospital, Tehran University of Medical Sciences, Tehran, Iran

*Corresponding author: Saeed Pourhassan, Department of Internal Medicine, Shariati Hospital, Tehran University of Medical Sciences, Tehran, Iran
Email: Pourhassan543@gmail.com

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Description

The most prevalent hematological disorder, anemia has significant negative effects on human health and affects nearly one third of the global population. In Ethiopia, the prevalence of anemia was between 10 and 26 percent for men and 23 percent for women in 2010, according to WHO criteria. Low- and middle-income nations bear the greatest burden of anemia. The WHO announced that 97% pallid populace lives in these nations and a big part of this weight was brought about by lack of iron pallor. Iron deficiency, intestinal parasite infestations, and a high incidence of malaria and the Human Immunodeficiency Virus (HIV) can all contribute to this burden on public health. The commonest reasons for preoperative frailty are clinic procured pallor, iron lack sickliness, and weakness of constant ailment. Negative clinical outcomes are linked to surgical patients who have anemia. Increased morbidity, mortality, the need for allogeneic blood transfusions, postoperative infections, and admissions to the intensive care unit, length of stay, readmission, and reoperation rates are among the perioperative risks associated with it.

Factors Associated with Preoperative Anemia

In patients who underwent both cardiac and non-cardiac surgery, preoperative anemia is a distinct risk factor for perioperative stroke, heart failure, arrhythmias, renal impairment, and death. All of these negative effects caused by preoperative anemia have significant financial repercussions, particularly for developing nations. In these nations, iron deficiency anemia alone resulted in a loss of 4 percent of GDP. As a result, anemic surgical patients require prompt diagnosis and appropriate preoperative optimization. Age, gender, anthropometric and nutritional factors, socioeconomic status, surgical conditions, recent prior surgery, comorbidities, medications, and the criteria used to define anemia all have an impact on the prevalence of preoperative anemia. We decided to conduct the current study to determine the scope of the issue and the conditions that contribute to it due to the wide range of results found in previous studies, the absence of well-

established evidence in the study area and the nation as a whole, the high prevalence of conditions that can exaggerate preoperative anemia, such as malnutrition, chronic diseases, diseases of poor hygiene, and poor economic status in the study area. As a result, the goal of this study was to find out how common preoperative anemia is and what factors are associated with it among adult patients scheduled for major elective surgery in 2020 at the University of Gondar Comprehensive Specialized Hospital in Northwest Ethiopia. All adult patients scheduled for major surgery during the study period at UoGCSH made up the source population, while all adult patients scheduled for major elective surgery consecutively made up the study population. This study did not include obstetric patients, patients with cognitive dysfunction, patients with known anemia who were receiving treatment, or patients who came in for day case surgery. The presence of preoperative anemia was the dependent variable, and the independent variables were socioeconomic and demographic factors such as age, sex, BMI, ASA status, educational status, occupation, residence, surgical conditions such as trauma, urologic, orthopedic, gynecologic, and recent prior surgery, comorbidity peptic ulceration, myocardial infarction, hypertension, HIV, malaria, diabetes mellitus, malignancy, asthma, and renal disease, medications (After moral endorsement was gotten from Moral Survey Panel of Institute of Medication and informed assent from every member, information were gathered by utilizing a pre-ried organized poll the pre-test was directed among 10 (5%) patients whose information were excluded from the principal results.

Early Detection and Prevention of Preoperative Anemia

The questionnaire was translated into Amharic after being primarily written in English. The principal investigator provided supervisory and data collection training. The variables were coded and cleaned after the data collection was completed. For error correction, the data were entered into Epi-data version 7 and analyzed using IBM Corporate SPSS version 20. The Shapiro-Wilk normality test was used to determine whether the data were normal. The results of descriptive statistical analyses—frequency, percentage, mean, median, and Inter-Quartile Range

—were presented. Cross-tabulations were used to examine how nominal data and preoperative anemia were related to one another. The goodness of fit was evaluated using the Hosmer and Lemeshow test. With the chi-squared test, bivariate and multivariate binary logistic regression, and a 95% confidence interval, the associations between the independent variables and the dependent variable were calculated and presented in crude and adjusted odds ratios. P-values below 0.05 for multivariate regression and below 0.2 for bivariate regression were considered statistically significant. Preoperative anemia

was widespread among adult patients scheduled for major elective surgery. Preoperative anemia was found to be significantly correlated with cancer, ASA II and III physical status, orthopedic surgery, gynecologic surgery, and recent prior surgery. We advise healthcare professionals to focus on early detection and prevention of preoperative anemia. Optimizing patients with preoperative anemia with low-cost, safe hematinic supplements can lessen the likelihood of anemia and its associated complications.