

PREVALENCE OF ANAEMIA AND BLOOD TRANSFUSION IN ELECTIVE HIP ARTHROPLASTY SURGERY AT TWO ACADEMIC HOSPITALS



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BACKGROUND:

- Preoperative anaemia is associated with adverse outcomes and increased risk of blood transfusion.
- Shortages of blood products, risks associated with blood transfusion and cost implications necessitates preoperative treatment of anaemia.
- This study aimed to identify:
 - the prevalence of anaemia
 - its association with blood transfusion
 - and the proportion of patients that were appropriately investigated and treated for anaemia preoperatively
 - in patients presenting for elective hip arthroplasty surgery.

METHODS:

- Retrospective patient records analysis for period 2012-2019.
- Inclusion criteria: adult patients for elective arthroplasty at two academic hospitals in Pretoria with no known coagulopathy and with complete patient records.
- Inclusion criteria met in 246 cases.
- The following was recorded: patient age, gender, initial haemoglobin level, investigations performed and treatment prescribed, volume and type of blood product administered perioperatively.
- Descriptive statistics were reported as means and standard deviation or frequencies and proportions.
- Associations were assessed with Chi-square or Fisher's exact tests with 95% level of significance.

CLASSIFICATION OF ANAEMIA:

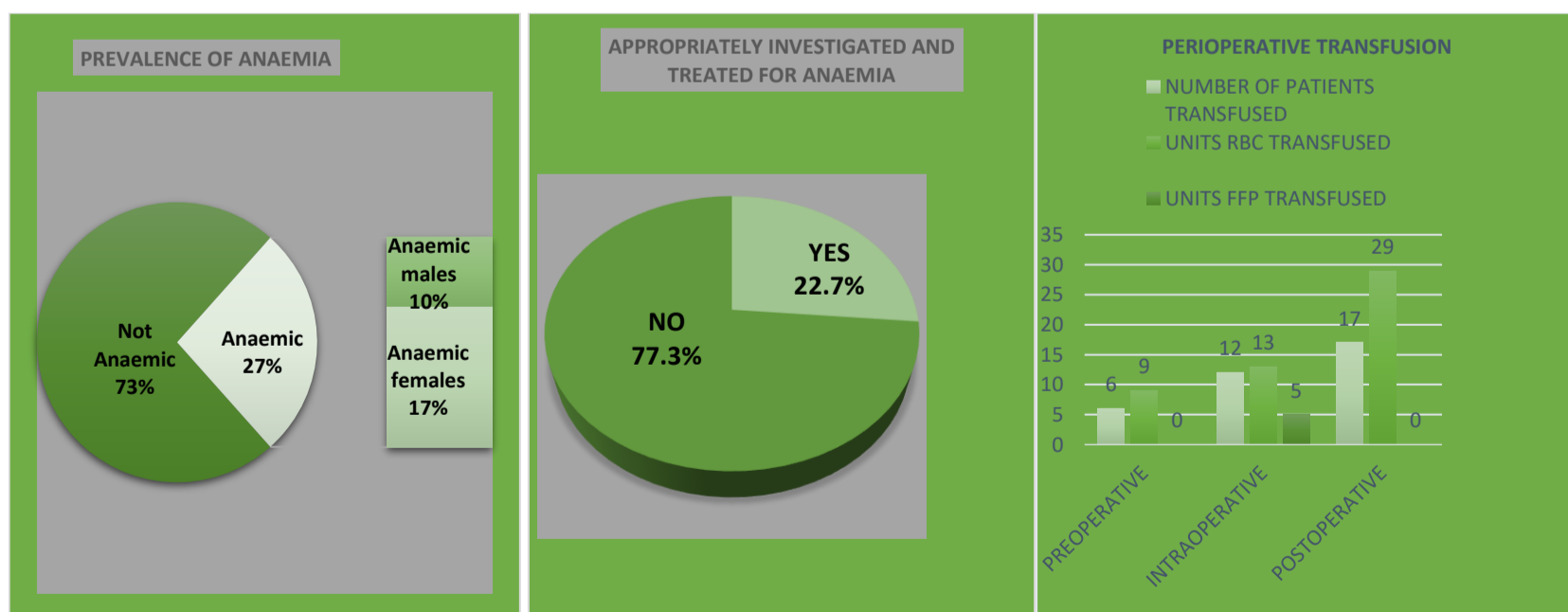
Anaemia	Mild	Moderate	Severe
Male	11-12,9g/dl	8-10,9g/dl	≤8g/dl
Female	11-11,9g/dl	8-10,9g/dl	≤8g/dl

RESULTS:

- The prevalence of anaemia was 26.8% with a greater prevalence in female patients (18% vs 9%).
- Normochromic, normocytic anaemia was the commonest type (60.6%) of anaemia.
- Most anaemic patients (53/66; 80.3%) had mild anaemia with 12/66 (18.2%) moderate and one (1.5%) severe anaemia.
- Only 22.7% anaemic patients were investigated (Iron studies, Vitamin B12 and Folate levels) and received treatment.
- Twenty-eight patients received perioperative transfusion (11.48%).
- Of patients who were not anaemic preoperatively, 3/180 (1.67%) required transfusion compared to 25/66 (38%) of anaemic patients.
- On further investigation. several patients were found to present with malignancies or gastro-intestinal pathology which may have been the underlying cause of the anaemia.

Anaemia	Yes	No	Total
Yes	25 (37.88%)	41 (62.12%)	66
No	3 (1.67%)	177 (98.33%)	180
Total	28 (11.38%)	218 (88.62%)	246

Fischer's Exact = 0,000 p = 0,01



CONCLUSION:

- Preoperative anaemia in elective hip arthroplasty surgery is common.
- Early investigation and appropriate treatment of anemic patients will decrease transfusion rates and improve perioperative outcomes.
- Development of a pre-anaesthetic clinic with the multidisciplinary managing these high-risk patients should be instituted.