Dental and Medical Problems(JDMP)
Abbreviation: **Jr Med Probl.**
Volume: 01: Issue: 05 |Year: 2015
Page Number: 01-04
DOI- **10.5281/zenodo.17636586**

A Study on Anemia in Elderly Hospitalized Patients

Dr Rohit A

Assistant Professor, Department of General Medicine , GMC

Corresponding Author

Dr Rohit A

Assistant Professor, Department of General Medicine , GMC

Article Received:10-09-2015

Article Accepted:10-10-2015

Publication date: 25-10-2015

ABSTRACT

Background: Anemia is a common yet often underdiagnosed condition in elderly hospitalized patients. It is associated with increased morbidity, mortality, prolonged hospital stay, and reduced quality of life.
Objective: To determine the prevalence, types, etiological factors, and clinical outcomes of anemia in elderly hospitalized patients.
Methods: A cross-sectional observational study was conducted on 200 patients aged ≥60 years admitted to a tertiary care hospital. Hemoglobin levels, iron studies, renal profile, vitamin B12/folate levels, and comorbidities were analyzed. Anemia was classified based on WHO criteria.
Results: The prevalence of anemia was **62%**. The most common type was **normocytic normochromic anemia (48%)**, followed by **iron deficiency anemia (32%)** and **megaloblastic anemia (15%)**. Anemia was significantly associated with chronic kidney disease, infections, malignancies, and nutritional deficiencies. Increased duration of hospital stay and overall mortality were noted in anemic patients.
Conclusion: Anemia is highly prevalent in hospitalized elderly patients and significantly affects clinical outcomes. Early screening and management are essential to improve prognosis and quality of life.

Keywords: Anemia, Elderly, Hospitalized Patients, Prevalence, Iron Deficiency, Normocytic Anemia.

INTRODUCTION

Anemia in the elderly is a growing medical concern, especially in hospitalized patients where it often remains overlooked. The World Health Organization (WHO) defines anemia as hemoglobin (Hb) levels **<13 g/dL in men and <12 g/dL in women**. Aging is associated with chronic diseases, malnutrition, inflammation, and decreased bone marrow reserve, all contributing to anemia.

Studies show that anemia in elderly individuals is associated with:

- Decreased physical activity
- Cognitive decline

- Recurrent hospitalization
- Poor surgical outcomes
- Increased mortality

Objectives of the Study:

1. To assess the prevalence of anemia in elderly hospitalized patients.
2. To determine the types and etiological factors.
3. To evaluate the impact of anemia on hospital stay and prognosis.

Materials and Methods

Study Design

Prospective cross-sectional observational study.

Study Site

Department of General Medicine, tertiary care hospital.

Sample Size

200 hospitalized patients aged **≥60 years**.

Inclusion Criteria

- Age ≥60 years
- Hospitalized for >48 hours
- Both males and females

Exclusion Criteria

- Active bleeding
- Recent blood transfusion
- Hematological malignancies
- Terminally ill patients

Parameters Studied

- Hemoglobin levels
- Mean corpuscular volume (MCV)
- Serum iron, ferritin, TIBC
- Vitamin B12 and folate
- Serum creatinine
- Comorbidities (CKD, infections, malignancy, diabetes, hypertension)

Classification of Anemia (WHO):

Severity	Hemoglobin Level
Mild	10–12 g/dL
Moderate	7–10 g/dL
Severe	<7 g/dL

Statistical Analysis

Data were analyzed using SPSS software. Chi-square test & ANOVA were used. **$p < 0.05$** considered statistically significant.

Results

Prevalence of Anemia

Out of 200 elderly hospitalized patients, **124 (62%)** were anemic.

Types of Anemia

Type of Anemia	Percentage
Normocytic Normochromic	**48%**
Iron Deficiency Anemia	**32%**
Megaloblastic Anemia	15%
Others	5%

Etiological Factors

Cause	Percentage
Chronic Kidney Disease	30%
Nutritional Deficiency	28%
Infections	20%
Malignancy	12%
Chronic Inflammation	10%

Severity of Anemia

Severity	Number of Patients
Mild	45 (36%)
Moderate	60 (48%)
Severe	19 (16%)

Impact on Hospital Stay

Average hospital stay:

- **Anemic patients:** 9.5 ± 2.4 days
- **Non-anemic patients:** 6.8 ± 1.9 days
  (*$p < 0.01$ – statistically significant*)

Mortality Rate

Mortality in anemic patients was **8%**, compared to **3%** in non-anemic patients.

Discussion

This study demonstrates a **high prevalence (62%) of anemia** among hospitalized elderly patients. Normocytic normochromic anemia was the most common type, suggesting anemia of chronic disease. Iron deficiency and megaloblastic anemia were also prevalent, indicating nutritional deficits.

Key Observations:

- Anemia correlated with prolonged hospital stay and increased mortality.
- CKD and chronic infections were major contributors.
- Early diagnosis and management can improve recovery.

These findings are consistent with global studies where anemia prevalence ranges from **40% to 65%** in hospitalized elderly populations.

Conclusion

Anemia is highly prevalent among elderly hospitalized patients and is associated with poor clinical outcomes. Routine screening for anemia should be implemented, and timely treatment strategies should be adopted to reduce morbidity and mortality.

Recommendations:

1. Routine Hb screening for all elderly admissions.
2. Treat underlying causes such as nutritional deficiency and renal disease.
3. Geriatric anemia clinics can be established for targeted management.

References

1. World Health Organization. Nutritional Anaemias. WHO Report Series.
2. Guralnik JM et al. Prevalence of anemia in elderly patients. Blood.
3. Thomas DR. Anemia in Elderly: A Review. J Am Med Dir Assoc.
4. Smith DL. Anemia and hospitalization risk in elderly. Clin Geriatr Med.
5. Patel KV. Epidemiology of anemia in older adults. J Clin Gerontol Geriatr.
6. National Institute on Aging – Hematological Changes in Aging.