УДК 616.155.194-053.88(476.2-25)

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CLINICAL CHARACTERISTICS OF ANEMIA IN ELDERLY PATIENTS HOSPITALIZED AT GOMEL CITY CLINICAL HOSPITAL: A RETROSPECTIVE ANALYSIS

Introduction

Anemia is a common hematological disorder among older adults and a major cause of illness, reduced physical function, and higher death rates in hospital settings. It significantly contributes to cardiovascular issues, cognitive decline, and poorer quality of life. Although diagnostic tools have improved, anemia in the elderly is often overlooked and inadequately treated, especially in acute care environments [1].

In healthy aging, the body typically maintains adequate red blood cell production to keep hemoglobin levels within a normal range. However, in many older adults, this balance is disrupted by a combination of factors rather than a single cause. Anemia in this population often stems from the complex interaction of chronic inflammation, nutritional deficits, diminished bone marrow function, and underlying conditions like chronic kidney disease or heart failure. Importantly, these disturbances can occur even in the absence of clear hematological symptoms [2].

In the elderly, abnormal blood counts and the complex origins of anemia contribute to worse health outcomes and longer hospital stays. Studies show that anemia linked to chronic disease, as well as cases with no clear cause, are especially common in this age group. These forms of anemia are difficult to diagnose because their symptoms are vague and often mimic other conditions associated with aging [3]. Consequently, a thorough investigation into the underlying cause of anemia is a critical part of assessing older patients, as it helps inform appropriate treatment decisions [4].

Identifying the specific causes and clinical features of anemia in older hospitalized patients is key to improving diagnosis, assessing risk, and planning effective care. Early detection of underlying factors may help prevent complications, minimize the need for transfusions, and enhance long-term health outcomes in this vulnerable group [5, 6].

Goal

This study aims to examine the causes and clinical characteristics of anemia in elderly patients admitted to Gomel City Clinical Hospital. Using a retrospective approach, we seek to identify the distribution of anemia types and explore their relationship with the clinical data.

Material and methods of the research

This retrospective study analyzed clinical data from 60 anemic patients aged 55 years and older (31 men, 29 women) hospitalized at Gomel City Clinical Hospital in 2025–2026 years. Routine laboratory investigations, including complete blood count and biochemical testing, were performed to determine anemia etiology. Data collected included demographics, hemoglobin levels, red blood cell indices, and etiological classification. Patients were categorized by morphological type and underlying causes. All data were analyzed using Microsoft Excel to assess frequency distributions and associations with demographic and clinical characteristics.

The results of the research and their discussion

Based on the data presented in tables 1, 2, and 3, this analysis examines the underlying causes and morphological features of anemia in elderly hospitalized patients.

As shown in table 1, patients were grouped according to the etiological type of anemia. The most frequently observed category was anemia of chronic disease or multifactorial anemia, affecting 33 individuals (55%). Probable iron deficiency anemia accounted for 12 cases (20%), while probable B_{12}-deficiency anemia was identified in 9 patients (15%). Anemia associated with malignancy was found in 6 patients (10%), and the remaining 6 cases (10%) were classified as unspecified or other types of anemia. These results suggest that in the majority of the study population, anemia was linked to chronic disease processes, with multifactorial origins being the most common presentation.

Table 1 – Etiological spectrum of anemia in elderly hospitalized patients

Etiological category	n	%
Anemia of chronic disease / multifactorial anemia	33	55
Probable iron deficiency anemia	12	20
Probable B12 deficiency anemia	9	15
Anemia of unknown origin	6	10

Anemia of chronic disease or multifactorial origin was the most prevalent, accounting for nearly half of all patients. This underscores the important role that chronic inflammation and multiple coexisting conditions play in the development of anemia among older adults.

Table 2 provides the morphological classification of anemia based on mean corpuscular volume (MCV) values.

Table 2 – Morphological characteristics of anemia in the studied cohort

Morphological type (by MCV)	MCV range (fL)	n	%
Normocytic	80–100	32	53.3
Microcytic	<80	18	30
Macrocytic	>100	10	16.7

Normocytic anemia was the most common morphological type, affecting 32 patients (53.3%). Microcytic anemia was observed in 18 individuals (30%), while macrocytic anemia was the least frequent, occurring in 10 cases (16.7%). This pattern is consistent with the etiological data, given that anemia of chronic disease typically presents as normocytic. The proportion of microcytic anemia aligns with the number of iron deficiency cases, and the macrocytic cases correspond to suspected vitamin B12 or folate deficiencies.

Table 3 offers a more detailed breakdown of patients within the anemia of chronic disease or multifactorial anemia subgroup.

Table 3 – Anemia of chronic disease / multifactorial anemia

Subcategory	Number of Patinets
Anemia associated with malignancy	10
Polyfactorial anemia	13
Anemia of Inflammation	3
Anemia of Chronic Kidney Disease	4
Anemia in diabetes / cardiovascular diseases	3

These findings illustrate the complex and often overlapping nature of anemia in older adults, where multiple contributing factors are frequently involved. The considerable number of patients with polyfactorial anemia emphasizes the need for thorough diagnostic assessment, rather than attributing the condition to a single cause. In this elderly cohort, the largest concentration of patients falls within the 70–79 age decade, making this the most common age group.

Conclusions

In this elderly cohort, anemia of chronic disease or multifactorial origin was most common (55%), followed by iron deficiency (20%). Normocytic anemia predominated (53.3%), reflecting the high burden of chronic disease-related anemia.

These findings highlight the need for comprehensive laboratory evaluation to identify underlying causes. Routine screening in geriatric assessments could improve early detection and targeted management, potentially enhancing outcomes and quality of life in this vulnerable population.

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УДК 616.891.6-057.875:[616.12+616.34

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THE EFFECT OF ANXIETY LEVELS ON CARDIAC AND INTESTINAL SYMPTOMS IN STUDENTS

Introduction

Anxiety is becoming increasingly common among university students, especially in complex fields such as healthcare. While emotional stress is well-documented, many students also experience physical symptoms that are often overlooked or misunderstood. Among the most common are heart palpitations and gastrointestinal issues, which reflect the deep connection between emotional and physical states. When a person experiences anxiety, the body's autonomic nervous system responds by releasing stress hormones that prepare the body for perceived threats. This fight-or-flight response can lead to an increased heart rate, commonly referred to as palpitations.

At the same time, the brain communicates with the gut through what researchers call the brain-gut axis a complex network of nerves and chemicals that links emotional centers with digestive function. The gut, sometimes referred to as the "second brain," is highly sensitive to emotional states and can react with discomfort, urgency, or changes in stool consistency.

Although previous studies have linked anxiety to cardiovascular symptoms and gastrointestinal issues separately, few have examined both together in a student population. This gap matters because students experiencing these symptoms may seek medical help unnecessarily, worried that something is physically wrong, when in fact their symptoms may be stress-related.