The high prevalence of Grade 3 hypertension (60%) and Risk Category 4 (55%) indicates a patient population requiring intensive management and close monitoring.

Conclusions

This study, predominantly of older adults (mean age 67.7 years) and females (67.5%), demonstrates a significant burden of advanced hypertension, with 60% of patients classified as Grade 3 and 55% falling into the highest cardiovascular risk category (Risk 4). The mean highest recorded systolic blood pressure of 186.4 mmHg and the average disease duration of nearly 13 years underscore the chronic and severe nature of hypertension.

Complication profile reveals alarming rates of morbidity, with 70% of patients experiencing some form of complication. Hypertensive crises affected nearly two-thirds of the cohort (65%), while stroke occurred in 17.5% of patients. Most notably, the analysis reveals a striking association between disease duration and severe outcomes: patients who experienced stroke had a mean disease duration of 21.4 years nearly double that of patients with crises only (12.3 years) and more than double that of patients without complications (9.2 years). This finding strongly suggests that prolonged uncontrolled hypertension progressively increases the risk of catastrophic cerebrovascular events.

LITERATURE

1. Emergency conditions in internal organs diseases : a textbook for international students of higher education institutions majoring in General Medicine / E. G. Malaeva, T. V. Aleinikova, O. A. Yarmolenko, T. A. Kurman. – Gomel : Gomel State Medical University, 2025. – 283 p.

2. Guidelines for the Management of Arterial Hypertension / European Society of Cardiology, European Society of Hypertension. – ESC, 2024.

3. Геморрагические диатезы : учеб.-метод. пособие для студентов 5–6 курсов всех фак. мед. вузов, врачей общей практики, терапевтов / З. В. Грекова, Е. Г. Малаева, С. А. Ходулева [и др.]. – Гомель : ГомГМУ, 2017. – 76 с.

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CLINICAL AND LABORATORY CHARACTERISTICS OF PATIENTS HOSPITALIZED WITH INFLAMMATORY BOWEL DISEASE: A SINGLE-CENTER RETROSPECTIVE STUDY

Introduction

Inflammatory bowel disease (IBD), comprising ulcerative colitis (UC) and Crohn's disease (CD), is a chronic, relapsing immune-mediated condition of the gastrointestinal tract [1]. Exacerbations often require hospitalization, representing a clinically important subgroup with more pronounced symptoms and laboratory abnormalities [2]. Beyond intestinal inflammation, IBD is frequently associated with systemic manifestations, including anemia, one of the most common laboratory findings [3, 5]. Anemia may result from chronic inflammation, iron deficiency, or prior blood loss, significantly affecting morbidity and quality of life [3, 5]. Routine laboratory markers such as hemoglobin (Hb), erythrocyte sedimentation rate (ESR), and C-reactive protein (CRP) are widely used to assess disease activity, though their relationship with hematological parameters can vary [4]. Prevalence and characteristics of anemia in IBD are heterogeneous, reflecting differences in disease severity, patient populations, and clinical settings [2, 5]. Evaluation of demographic, clinical, and laboratory parameters in hospitalized patients may provide valuable insight into their hematological profile and support individualized management [3].

Goal

To describe selected clinical features and routine laboratory parameters in patients hospitalized with inflammatory bowel disease.

Material and methods of research

A retrospective cross-sectional study was conducted at the gastroenterology department of the Gomel City Clinical Hospital № 3 (Gomel, Republic of Belarus). Medical records of patients hospitalized with inflammatory bowel disease during 2025 were reviewed. A total of 28 patients with ulcerative colitis or Crohn's disease were initially identified; one patient was excluded due to insufficient clinical and laboratory documentation, resulting in a final study population of 27 patients. Demographic data, IBD type, disease duration, clinical disease activity, and selected clinical features were extracted from inpatient records. Disease activity was determined based on clinical documentation in inpatient records rather than standardized activity indices. Laboratory parameters analyzed included hemoglobin (Hb) concentration, CRP, and ESR, which are routinely used markers in hospitalized IBD patients. Anemia was defined according to European Crohn's and Colitis Organisation (ECCO) recommendations, with hemoglobin <130 g/L in men and <120 g/L in women, and severity classified based on these guidelines [3]. Data was entered into Microsoft Excel and analyzed using Jamovi statistical software. Descriptive statistics were used to summarize clinical and laboratory characteristics, with continuous variables presented as mean±standard deviation and categorical variables as absolute numbers and percentages. Correlations between Hb levels and inflammatory markers (CRP and ESR) were assessed using Spearman correlation analysis, with a p-value <0.05 considered statistically significant.

The results of the research and their discussion

A total of 27 patients hospitalized with inflammatory bowel disease were included in the analysis, comprising patients with ulcerative colitis and Crohn's disease with varying disease duration and clinical activity. Baseline demographic, clinical, and laboratory characteristics are summarized in Table 1. Patients with ulcerative colitis were older on average than those with Crohn's disease, and moderate disease activity was more frequently observed in the ulcerative colitis group.

Table 1. Comparison of baseline characteristics between hospitalized ulcerative colitis and Crohn's disease patients

	UC (n=17)	CD (n=10*)
Age (years), mean ± SD	43.2 ± 14.1	36.0 ± 12.7
Sex, n (%)		
Male	7 (41.2%)	2 (20.0%)
Female	10 (58.8%)	8 (80.0%)
History of anemia, n (%)		
Yes	4 (23.5%)	5 (50.0%)
No	13 (76.5%)	5 (50.0%)
Disease activity, n (%)		
Mild	5 (29.4%)	6 (60.0%)
Moderate	11 (64.7%)	3 (30.0%)
High	1 (5.9%)	0 (0.0%)
Missing	—	1 (10.0%)
CRP (mg/L), mean ± SD	24.9 ± 55.5	10 ± 16.3
Hb (g/L), mean ± SD	134 ± 15.7	131 ± 9.7

*Disease activity data were unavailable for one patient with Crohn's disease. Percentages are calculated based on the total number of patients within each diagnostic group.

Figure 1 – Comparison of baseline characteristics between hospitalized ulcerative colitis and Crohn's disease patients

Among patients with ulcerative colitis, left-sided colitis (E2) was the most common disease extent (64.7%), followed by extensive colitis (23.5%) and proctitis (11.8%). In Crohn's disease, ileal involvement predominated (60.0%), with fewer patients exhibiting colonic or upper gastrointestinal involvement. All Crohn's disease patients demonstrated a non-stricturing, non-penetrating disease behavior. This phenotype distribution is consistent with previously reported IBD patterns and may partly explain the absence of severe complications in this cohort [1].

Extraintestinal manifestations were present in 29.6% of patients. Anemia during the time of hospitalization was identified in 6 patients (22.2%), while 9 patients (33.3%) had a history of anemia in their anamnesis. This prevalence is lower than the pooled global prevalence of 36.9% reported in a recent systematic review and meta-analysis of IBD populations, which demonstrated substantial variability across geographic regions and clinical settings [5]. Differences in anemia frequency may reflect variations in disease severity, study design, and population characteristics, particularly in smaller single-center cohorts. According to ECCO recommendations for hemoglobin thresholds, anemia was predominantly mild to moderate among affected patients, with no cases of severe anemia observed [3].

Anemia was more frequently observed in patients with mild and moderate disease activity, while no anemia was observed in the single patient classified as having high activity; this finding should be interpreted cautiously due to the small number of patients with severe disease. Contemporary cohort data confirm that anemia in IBD is multifactorial and influenced by inflammatory burden, iron deficiency, and cumulative disease effects rather than clinical activity alone [1, 2]. Correlation analysis revealed a moderate negative association between hemoglobin and erythrocyte sedimentation rate ($\rho = -0.417$, $p=0.034$), supporting the established relationship between inflammatory activity and anemia in IBD [4, 5]. This observation is consistent with the finding that inflammatory signaling in IBD increases hepcidin, reducing iron availability and contributing to lower hemoglobin levels [6]. In contrast, no significant correlation was observed between hemoglobin and C-reactive protein ($\rho=0.030$, $p=0.889$), which may reflect variability in inflammatory marker behavior in IBD populations, as well as the limited statistical power inherent to small cohorts [4].

Despite limitations such as the retrospective design, single-center setting, small sample size, incomplete iron metabolism data, and reliance on clinical documentation rather than standardized disease indices, these findings emphasize the importance of routine hematological and inflammatory assessments in hospitalized patients with inflammatory bowel disease, in line with ECCO recommendations for systematic evaluation and management of extraintestinal manifestations, including anemia [3].

Conclusions

This study describes the clinical and laboratory characteristics of patients hospitalized with inflammatory bowel disease, highlighting the heterogeneity of disease presentation and laboratory findings in the inpatient setting. Anemia was present in a subset of patients and showed an association with inflammatory burden as reflected by erythrocyte sedimentation rate, while no significant relationship was observed with C-reactive protein. Recognition of these clinical and laboratory patterns may assist clinicians in identifying patients at higher risk of inflammatory complications and anemia, thereby supporting more timely diagnostic evaluation, monitoring, and individualized management strategies during hospitalization. These findings emphasize the importance of routine assessment of hematological and inflammatory parameters in hospitalized patients with IBD.

LITERATURE

1. Clinical and laboratory characteristics of anaemia in hospitalized patients with inflammatory bowel disease / M. Woźniak, A. Borkowska, M. Jastrzębska [et al.]. // J Clin Med. – 2023. – Vol. 12, № 7. – P. 2447.

2. Anemia in inflammatory bowel disease: practice patterns and clinical outcomes in a large national veterans cohort / J. A. Sninsky, C. Brooks, S. Sansgiry [et al.]. // Crohns Colitis 360. – 2025. – Vol. 7, № 3. – P. 12.

3. Guidelines on Extraintestinal Manifestations in Inflammatory Bowel Disease / H. Gordon, J. Burisch, P. Ellul [et al.]. // J Crohns Colitis. – 2024. – Vol. 18, № 1. – P. 1–37.

4. Use of biomarkers of inflammation in the differentiation of iron deficiency and anaemia – lessons from inflammatory bowel disease / K. Farrag, A. Aksan, V. Ademaj-Kospiri [et al.]. // Diagnostics (Basel). – 2024. – Vol. 14, № 14. – P. 1515.

5. Burden of anemia in inflammatory bowel disease: a systematic review and meta-analysis / S. Tharu, S. K. Kushwaha, R. Srivastava [et al.]. // Clinical Epidemiology and Global Health. – 2026. – Vol. 37. – P. 102262.

6. The role of hepcidin in the inflammatory and iron homeostasis axis in inflammatory bowel diseases: a systematic review / L. F. Parreira, A. V. R. Teixeira, S. S. N. Siqueira [et al.]. // Transl Gastroenterol Hepatol. – 2026. – Vol. 11. – P. 25.

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IMPACT OF DIETARY HABITS AND STRESS ON CARDIOVASCULAR DISEASE RISK AMONG UNIVERSITY STUDENTS: A CALL FOR PREVENTIVE LIFESTYLE INTERVENTIONS

Introduction

According to the WHO, an unhealthy diet and insufficient physical activity are the leading global risks to health. Dietary behavior is a modifiable factor in cardiovascular disease (CVD) prevention. Psychosocial stress can lead to changes in dietary patterns and under chronic stress conditions, high caloric and hyper palatable foods are preferred. Diet affects diverse cardio metabolic risk factors such as obesity, lipid blood profile, blood pressure, glucose-insulin homeostasis, endothelial health, adipocyte metabolism, cardiac function, metabolic expenditure, weight regulation, visceral adiposity, and the microbiome. Studies have demonstrated how chronic stress exposure increases susceptibility to diet-induced obesity, with induced spontaneous hyperphagia and a preference for highly-palatable food, rich in calories, trans fat, salt and sugar. The relationship between nutrition and stress on cardiovascular risk in university students is significant. Poor dietary habits, often influenced by stress and lack of information about nutrition, can lead to malnutrition or overnutrition, increasing the risk of preventable diseases [1, 2, 3].

Goal

The aim of this article is to assess the impact of nutritional habits and academic stress on cardiovascular diseases (CVD) among university students. Specifically the study seeks to provide a comprehensive understanding of how lifestyle and stress factors contribute to cardiovascular risk among university students.

Material and methods of research

The main material of this research was an online questionnaire developed with the help of Google Forms which comprised of questions on demographics, dietary patterns including having a balanced diet, consumption of fast foods, sugary drinks, excess salt as well as meal skipping behaviors and awareness. It involved 43 students of Gomel State Medical University above 18 years of age. Responses were collected anonymously to ensure confidentiality.