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(Research Article)

Knowledge level and its impact on therapeutic adherence in patients with inflammatory bowel disease: A cross-sectional study

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Abstract

Background: Therapeutic adherence is a key determinant of clinical outcomes in patients with inflammatory bowel disease (IBD). Patient knowledge of disease mechanisms and treatment strategies plays a crucial role in adherence, yet remains insufficiently explored.

Aim: To assess the level of disease-related knowledge among patients with IBD and evaluate its association with therapeutic adherence and health-related behaviors.

Methods: We conducted a cross-sectional study including 120 patients with IBD using a structured anonymous questionnaire. Knowledge was assessed through a self-reported Likert scale (1–5) and objective questions regarding disease characteristics and treatment goals. Therapeutic adherence was evaluated based on self-reported behavior, and patient responses during disease flares were analyzed.

Results: The mean perceived knowledge score was 3.2/5, indicating a moderate level of understanding. Only 31% of patients had a complete understanding of treatment objectives, while 25% had no clear knowledge. Misconceptions persisted, with 19% believing IBD to be infectious and 12% unaware of its chronic nature.

Therapeutic adherence was reported as consistent in 81% of patients, whereas 19% reported irregular adherence. A strong association was observed between knowledge and adherence: 85% of patients with good knowledge were adherent compared to only 33% among those with low knowledge. During disease flares, 75% of patients consulted their physician, while 25% initially sought alternative information sources.

Conclusion: Higher levels of disease-related knowledge are associated with improved therapeutic adherence in IBD. Persistent misconceptions highlight the need for structured and targeted educational interventions to optimize long-term disease management.

Keywords: Inflammatory bowel disease; Therapeutic adherence; Patient knowledge; Health literacy; Disease perception; Patient education

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1. Introduction

Inflammatory bowel disease (IBD), including Crohn's disease and ulcerative colitis, is a chronic, relapsing condition that requires lifelong management and active patient involvement [1,2]. Therapeutic adherence is a key determinant of disease control, relapse prevention, and long-term outcomes [3].

Despite significant advances in treatment, non-adherence remains a common issue in IBD, affecting up to 30–45% of patients and significantly increasing the risk of relapse and disease complications [3]. Adherence is influenced by multiple factors, including treatment complexity, adverse effects, psychological burden, and notably, patients' knowledge and understanding of their disease [4].

Several studies have shown that patients with a better understanding of their condition are more likely to adhere to treatment and adopt appropriate health-related behaviors [4,5]. Conversely, misconceptions and insufficient knowledge may lead to poor adherence and suboptimal disease control [6,7].

In parallel, patients increasingly seek information from external sources, particularly the internet and social media, which may shape their perceptions and influence their decision-making [8,9]. In this evolving informational environment, assessing patient knowledge and its relationship with therapeutic adherence has become essential.

Therefore, the aim of this study was to evaluate the level of disease-related knowledge among patients with IBD and to analyze its association with therapeutic adherence and patient behavior.

2. Materials and methods

2.1. Study Design and Population

This cross-sectional study was conducted in a tertiary care center and included 120 patients with confirmed inflammatory bowel disease (IBD), comprising Crohn's disease and ulcerative colitis.

Eligible patients were aged ≥18 years and had an established diagnosis based on standard clinical, endoscopic, and histological criteria.

2.2. Data Collection

Data were collected using a structured, anonymous questionnaire administered during outpatient consultations.

The questionnaire included the following domains:

- Demographic and clinical characteristics (age, sex, type of IBD)
- Knowledge level, assessed through both self-reported evaluation (Likert scale 1–5) and objective questions regarding disease characteristics and treatment goals
- Therapeutic adherence, categorized as always adherent or irregular adherence
- Behavior during disease flares
- Motivation and perceived disease control

2.3. Statistical Analysis

Data were analyzed using descriptive statistics. Qualitative variables were expressed as percentages, and quantitative variables as mean ± standard deviation.

3. Results

3.1. Patient Characteristics

A total of 120 patients were included in the study. The mean age was 34 ± 10 years, reflecting a relatively young population typical of IBD cohorts. A slight female predominance was observed, with approximately 58% of patients being female, corresponding to a sex ratio (F/M) of 1.2.

Table 1 Baseline Characteristics of the Study Population

Variable	Value
Total patients	120
Mean age (years)	34 ± 10
Female (%)	58%
Sex ratio (F/M)	1.2

3.2. Knowledge Level

The overall level of disease-related knowledge was moderate, with a mean perceived score of 3.2/5.

Only 31% of patients demonstrated a complete understanding of treatment objectives, whereas 44% had partial knowledge and 25% had no clear understanding. These findings suggest that a substantial proportion of patients lack adequate knowledge regarding their disease management.

Importantly, persistent misconceptions were identified. Nearly one-fifth of patients (19%) believed IBD to be an infectious disease, and 12% were unaware of its chronic nature, highlighting significant gaps in patient education.

3.3. Therapeutic Adherence

Therapeutic adherence was reported as consistent in 81% of patients, while 19% reported irregular adherence.

The main reasons for non-adherence included forgetfulness and treatment-related side effects, suggesting that both behavioral and treatment-related factors contribute to adherence issues.

3.3.1. Association Between Knowledge and Adherence

A strong relationship was observed between knowledge level and therapeutic adherence.

Among patients with good knowledge, 85% were adherent, compared to only 33% among those with low knowledge. This marked difference highlights the potential impact of patient education on treatment adherence.

Furthermore, patients with a clear understanding of treatment objectives demonstrated near-perfect adherence, reinforcing the importance of targeted educational interventions.

3.3.2. Behavior During Disease Flares

During disease flares, the majority of patients (75%) reported consulting their physician promptly, reflecting appropriate health-seeking behavior.

However, 25% of patients initially relied on alternative sources of information, such as the internet or advice from other patients, which may expose them to non-evidence-based recommendations.

No cases of self-medication without medical advice were reported.

3.3.3. Motivation and Perceived Disease Control

Patients reported a high level of motivation to follow medical recommendations, with a mean score of 4.6/5, indicating strong engagement in disease management.

In contrast, perceived disease control was moderate (3.9/5). Lower adherence tended to be associated with reduced perceived control, suggesting a potential interaction between psychological perception and treatment behavior.

4. Discussion

This study highlights the pivotal role of patient knowledge as a key determinant of therapeutic adherence in inflammatory bowel disease (IBD), a chronic condition requiring long-term management and active patient involvement [1,2].

To our knowledge, this is one of the few studies evaluating the direct relationship between patient knowledge and therapeutic adherence in a real-life IBD cohort.

Overall, our findings revealed a moderate level of disease-related knowledge, with persistent misconceptions regarding the nature and management of IBD. These results are consistent with previous studies demonstrating that significant knowledge gaps remain among patients with IBD, despite advances in treatment and access to information [4,5,10]. Poor understanding of disease mechanisms and treatment goals may contribute to inadequate disease perception and suboptimal health behaviors.

A major finding of our study is the strong association between knowledge level and therapeutic adherence. Patients with better knowledge were significantly more likely to adhere to treatment, which aligns with previous evidence identifying knowledge as a major predictor of adherence in chronic diseases [3,11]. Non-adherence has been reported in up to 30–45% of IBD patients and is associated with increased risk of relapse, hospitalization, and healthcare costs [3,12]. Therefore, improving patient knowledge represents a critical lever to enhance adherence and clinical outcomes.

Furthermore, our results highlight the persistence of misconceptions, particularly regarding the chronic nature and etiology of IBD. Similar observations have been reported in studies focusing on dietary beliefs and disease perception, where patients often adopt restrictive or inappropriate dietary behaviors based on incorrect assumptions [6,7,13]. These misconceptions may negatively impact nutritional status, quality of life, and disease control.

Another important finding is the reliance of a subset of patients on alternative sources of information, particularly during disease flares. This reflects the growing role of digital health and online information-seeking behavior among patients [8,9,14]. While digital platforms provide rapid access to information, they are often associated with variable quality and potential misinformation [15]. Previous studies have shown that exposure to inaccurate health information may influence patient decisions, increase anxiety, and negatively affect adherence [16,17].

In addition, the observed relationship between perceived disease control and adherence suggests that psychological and cognitive factors play a significant role in patient behavior. Patients with lower perceived control were less adherent, which is consistent with studies highlighting the impact of psychological distress, illness perception, and coping strategies on disease outcomes in IBD [18,19].

From a clinical perspective, these findings emphasize the need for a proactive and structured approach to patient education. International guidelines, including those from ECCO, strongly recommend integrating patient education and shared decision-making into routine care [20]. Educational interventions, including therapeutic education programs and digital tools, have been shown to improve knowledge, adherence, and quality of life in patients with IBD [11,14].

This study has several strengths. It includes a relatively large cohort of patients and provides a comprehensive evaluation of disease-related knowledge, therapeutic adherence, and behavioral responses in a real-life clinical setting. Moreover, it highlights the relationship between knowledge and adherence, offering clinically relevant insights that may inform future interventions.

However, some limitations should be acknowledged. The single-center design may limit the generalizability of the findings. In addition, the use of self-reported data may introduce recall and reporting biases. Finally, the absence of inferential statistical analysis limits the ability to establish causal relationships between knowledge and adherence.

Despite these limitations, our study provides valuable insights into the role of patient knowledge in IBD management and underscores the importance of structured educational strategies.

5. Conclusion

This study highlights the important role of patient knowledge in therapeutic adherence among individuals with inflammatory bowel disease. Although the overall level of knowledge was moderate, significant gaps and persistent misconceptions were identified, particularly regarding disease characteristics and treatment objectives.

A clear association was observed between knowledge and adherence, with better-informed patients demonstrating substantially higher adherence rates. These findings underline the clinical relevance of patient education in optimizing treatment outcomes.

Improving patient knowledge through structured educational interventions and effective physician–patient communication should be considered a key component of IBD management to enhance adherence and long-term disease control.

Compliance with ethical standards

Disclosure of conflict of interest

The authors declare that they have no conflicts of interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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