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ASSESSMENT OF LONG-TERM URATE-LOWERING THERAPY EFFECTIVENESS AND ADHERENCE IN PATIENTS WITH GOUT

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Abstract

This article analyzes the effectiveness of long-term urate-lowering therapy (ULT) and the problems of adherence in patients with gout. The current clinical and social significance of gout, as well as its association with cardiovascular and renal complications, is highlighted. Based on the analysis of scientific literature, the key role of ULT in maintaining serum uric acid (SUA) levels within target ranges is demonstrated. The article discusses patients’ adherence to urate-lowering therapy, reasons for low adherence, and its impact on clinical outcomes. Additionally, methods for assessing adherence, including subjective and objective approaches, the importance of laboratory monitoring, and comprehensive patient education strategies, are reviewed. In conclusion, improving adherence to urate-lowering therapy is crucial for effective gout management, reducing complications, and enhancing patients’ quality of life.

Keywords: Gout, urate-lowering therapy, serum uric acid, treatment adherence, urate-lowering drugs, long-term therapy, complications.

Introduction

Gout is a chronic disease caused by disorders of purine metabolism, resulting in elevated uric acid (urate) levels and deposition of urate crystals in tissues such as bones and kidneys, leading to inflammation [1]. Clinically, it predominantly

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affects joints, particularly those of the toes, causing severe pain, swelling, and redness, and may also lead to kidney stones (urolithiasis) and tophi formation (collections of urate crystals in tissues). Despite being known for centuries, gout remains highly relevant today, with increasing clinical and social significance. The rising prevalence of gout is closely linked to population aging, poor dietary habits, physical inactivity, increased alcohol consumption, and widespread metabolic syndrome. Modern literature recognizes gout not only as a rheumatic disease but also as a complex systemic pathology [16].

The clinical course usually begins with acute arthritis flares and progresses to a chronic state if adequately treated. Over time, irreversible destructive joint changes, tophi formation, limited mobility, and decreased work capacity occur. Furthermore, patients often develop renal damage, nephrolithiasis, chronic kidney disease, and cardiovascular complications [18]. These factors increase disease severity, worsen prognosis, and require a comprehensive management approach.

Recent epidemiological studies indicate a strong pathogenetic link between gout and cardiovascular diseases. Hyperuricemia is associated with an increased risk of arterial hypertension, atherosclerosis, ischemic heart disease, and stroke. Therefore, management of gout should focus not only on relieving pain but also on maintaining long-term stable serum uric acid levels [6,13]. This underscores the importance of studying the effectiveness of urate-lowering therapy and patient adherence from a scientific perspective.

In modern treatment strategies, urate-lowering therapy plays a leading role. This therapy aims to reduce uric acid synthesis or enhance its excretion, representing a pathogenetic approach to treatment. International clinical guidelines recommend achieving and maintaining target SUA levels as the primary treatment goal for patients with gout [8,15]. This approach helps reduce flares, promote tophi regression, and prevent long-term complications.

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Urate-lowering therapy is typically long-term, often lifelong, making patient adherence a key determinant of treatment effectiveness. Literature analyses indicate that a significant proportion of gout patients do not fully follow prescribed treatment regimens, resulting in suboptimal control of uric acid levels [3].

Studies show that adherence to urate-lowering therapy among patients remains low. In several observations, only 39.1% of patients regularly followed ULT [1,14]. Meanwhile, 36.2% had never received urate-lowering therapy, 13.8% independently discontinued their medications, 8% took treatment episodically, and 2.9% lacked access to medications. Consequently, only a small proportion of patients achieved target SUA levels in some studies [4].

Meta-analyses indicate that, globally, adherence to ULT among gout patients averages 45–48%, which remains insufficient even in developed healthcare systems. Among patients taking allopurinol, high adherence was observed in only 25% of cases, medium in 40%, and low in 35%. Patients on febuxostat had high adherence in more than 50% of cases [9].

Poor adherence is also reflected in clinical indicators. Patients receiving ULT had a mean SUA of 7.5 ± 0.2 mg/dL, whereas untreated patients had 8.5 ± 0.3 mg/dL. This demonstrates that inadequate adherence significantly reduces disease control. Studies also report that only approximately 13% of patients experienced a substantial reduction in acute arthritis flares over the past year [2].

Adherence encompasses not only taking medications as prescribed but also adherence to diet, lifestyle modifications, limiting alcohol and purine-rich foods, and maintaining body weight [11]. All these factors directly affect the overall effectiveness of ULT.

Reasons for low adherence are multifactorial. Clinically, intermittent symptom remission can lead patients to mistakenly believe they are cured. Psychological factors include difficulty accepting a chronic disease, negative attitudes toward long-term therapy, and low motivation. Socioeconomic factors include the cost

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of medications, limited access to healthcare, and insufficient patient education [10].

Assessing adherence has significant diagnostic and prognostic value in clinical practice. It allows physicians to evaluate actual treatment patterns, optimize dosages, and tailor individualized therapeutic strategies. Scientific literature recommends both subjective and objective methods to assess adherence [6,17]. Subjective methods include standardized questionnaires and self-assessment scales, which evaluate patients' attitudes, knowledge, and motivation [12]. Objective methods rely on laboratory monitoring, with dynamic SUA levels serving as an important indirect marker of adherence.

Recently, comprehensive strategies to improve adherence in gout patients have been developed. These include patient education programs, regular laboratory monitoring, effective physician–patient communication, and individualized treatment plans [7]. Studies indicate that patients who understand the nature of their disease and treatment goals demonstrate significantly higher adherence.

Conclusion

Assessing and improving adherence to urate-lowering therapy in gout patients remains a critical issue in modern rheumatology. Literature analysis confirms its relevance and direct impact on disease progression, complications, and quality of life. Evidence-based strategies to enhance adherence are essential for effective disease control, improving long-term prognosis, and reducing healthcare costs. Therefore, extensive research in this area is of high scientific and practical value for dissertation work.

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