Journal of Population Therapeutics & Clinical Pharmacology

RESEARCH ARTICLE
DOI: 10.69980/13tdpy56

CLINICAL CHARACTERISTICS AND PRESENTATION OF UVEITIS IN A TERTIARY CARE CENTRE IN SOUTHERN RAJASTHAN

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Abstract

Background

Uveitis is a significant cause of ocular morbidity and visual impairment. The clinical presentation and course of uveitis vary widely depending on the underlying pathology and anatomical involvement. Understanding the clinical profile of uveitis is essential for early diagnosis, appropriate management, and prevention of complications.

Aim: To evaluate the clinical profile and pattern of uveitis among patients attending a tertiary eye care centre in Southern Rajasthan.

Methods:A hospital-based cross-sectional observational study was conducted in the Department of Ophthalmology at a tertiary care centre in Southern Rajasthan over a period of 18 months. A total of 140 patients diagnosed with uveitis were included in the study. Detailed clinical evaluation was performed, and uveitis was classified based on clinical course (acute, chronic, recurrent), laterality (unilateral or bilateral), and pathological type (granulomatous and non-granulomatous). Data were analyzed using descriptive statistics.

Results: Out of 140 patients, chronic uveitis was the most common clinical presentation (49.3%), followed by acute (32.1%) and recurrent uveitis (18.6%). Bilateral involvement (61.4%) was more frequent than unilateral disease (38.6%). On pathological classification, non-granulomatous uveitis (67.1%) was more common compared to granulomatous uveitis (32.9%). Chronic uveitis was more commonly associated with bilateral involvement.

Conclusion: Chronic and bilateral forms of uveitis were predominant in the present study, with non-granulomatous type being the most common pathological pattern. These findings emphasize the importance of detailed clinical evaluation for early diagnosis and appropriate management of uveitis to prevent complications.

Keywords: Uveitis, Clinical profile, Chronic uveitis, Bilateral uveitis, Non-granulomatous, Ocular inflammation.

Introduction

Uveitis comprises a heterogeneous group of intraocular inflammatory disorders involving the uveal tract and adjacent ocular structures, which can lead to significant visual morbidity if not diagnosed and managed appropriately.[1] The clinical presentation of uveitis varies widely depending on the anatomical location, underlying etiology, and severity of inflammation. Accurate classification and standardized terminology are essential for proper diagnosis and management of the disease.[2]

The epidemiology and clinical profile of uveitis show considerable variation across different geographic regions due to differences in environmental, infectious, and genetic factors.[1] Epidemiological studies have demonstrated that uveitis predominantly affects individuals in the economically productive age group and contributes significantly to visual impairment worldwide.[3,4]

Clinical classification of uveitis includes categorization based on anatomical involvement, clinical course, laterality, and pathological type.[2,8] The disease may present as acute, chronic, or recurrent inflammation, each having different clinical implications and prognostic outcomes. Chronic and recurrent uveitis are particularly important as they are often associated with long-term complications and visual disability.[10]

The clinical presentation of uveitis can also vary depending on associated systemic conditions. Certain systemic diseases, including autoimmune disorders and seronegative spondyloarthropathies, are known to be associated with specific patterns of uveitis.[13] Additionally, conditions such as diabetes and other systemic inflammatory disorders may influence the clinical course and severity of intraocular inflammation.[5]

Previous studies have highlighted that anterior uveitis is the most common form, and its clinical features and response to treatment vary depending on the underlying cause.[9] The use of corticosteroids and newer therapeutic agents has improved the management of uveitis; however, complications such as cataract, glaucoma, and macular edema remain significant challenges.[6]

Regional studies are important to understand the clinical pattern and presentation of uveitis in specific populations. In India, studies have demonstrated variation in the pattern of uveitis across different regions, emphasizing the need for region-specific data.[12] Understanding the clinical profile of uveitis, including its course, laterality, and pathological characteristics, is crucial for early diagnosis, appropriate management, and prevention of complications.

Therefore, the present study was undertaken to evaluate the clinical profile and pattern of uveitis in patients attending a tertiary eye care centre in Southern Rajasthan, with special emphasis on clinical course, laterality, and pathological characteristics of the disease.

Aim and Objectives

Aim:To evaluate the clinical profile and pattern of uveitis **among patients attending a tertiary eye care centre in Southern Rajasthan.**

Objective

• To analyze the **clinical characteristics of uveitis**, including clinical course, laterality, and pathological type, and their interrelationship in the study population.

Materials and Methods

This hospital-based cross-sectional observational study was conducted in the Department of Ophthalmology, R.N.T. Medical College and associated hospitals, Udaipur, Rajasthan, over a period of 18 months (January 2021 to June 2022). A total of 140 patients diagnosed with uveitis attending the outpatient department were included in the study after obtaining informed consent and institutional ethical clearance.

Patients with clinical features of anterior, intermediate, posterior uveitis, or panuveitis were included, while those with recent ocular surgery (within 6 weeks), post-traumatic uveitis, or unwilling to participate were excluded. All patients underwent detailed history taking and comprehensive ophthalmic examination, including visual acuity assessment, slit lamp examination, fundus evaluation, and intraocular pressure measurement. Relevant laboratory investigations were performed as indicated.

Uveitis was classified based on **clinical course (acute, chronic, recurrent), laterality (unilateral/bilateral), and pathological type (granulomatous/non-granulomatous)**. Data were entered in Microsoft Excel and analyzed using SPSS version 17. Results were expressed as frequencies and percentages.

Results

Table 1: Clinical Course of Uveitis in the Study Population (n = 140)

Clinical Course	Number of Cases	Percentage (%)
Chronic	69	49.3
Acute	45	32.1
Recurrent	26	18.6
Total	140	100

The distribution of uveitis according to clinical course is shown in Table 1. In the present study, chronic uveitis was the most common presentation (49.3%), followed by acute (32.1%) and recurrent uveitis (18.6%).

Table 2: Laterality of Uveitis in the Study Population (n = 140)

Laterality	Number of Cases	Percentage (%)
Bilateral	86	61.4
Unilateral	54	38.6
Total	140	100

As shown in Table 2, bilateral involvement was more common (61.4%) compared to unilateral cases (38.6%), indicating a predominance of bilateral disease in the study population.

Table 3: Pathological Type of Uveitis in the Study Population (n = 140)

Pathology	Number of Cases	Percentage (%)
Granulomatous	46	32.9
Non-granulomatous	94	67.1
Total	140	100

The pathological distribution of uveitis is presented in Table 3. Non-granulomatous uveitis was more common (67.1%) than granulomatous uveitis (32.9%).

Table 4: Clinical Course and Laterality of Uveitis in the Study Population (n = 140)

Clinical Course	Bilateral	Unilateral	Total
Chronic	45	24	69
Acute	28	17	45
Recurrent	13	13	26
Total	86	54	140

The association between clinical course and laterality is shown in Table 4. Chronic uveitis was more frequently associated with bilateral involvement, whereas acute and recurrent cases showed relatively balanced distribution between unilateral and bilateral involvement.

Table 5: Pathological Type and Laterality of Uveitis in the Study Population (n = 140)

Pathology	Bilateral	Unilateral	Total
Granulomatous	30	16	46
Non-granulomatous	56	38	94
Total	86	54	140

As depicted in Table 5, both granulomatous and non-granulomatous uveitis were more commonly bilateral, with non-granulomatous type contributing the majority of cases.

Discussion

Uveitis is a complex intraocular inflammatory condition with diverse clinical presentations depending on the underlying etiology, anatomical involvement, and host factors.[7] The clinical profile of uveitis plays a crucial role in guiding diagnosis, management, and predicting outcomes. Standardized classification based on clinical course, laterality, and pathological type is essential for uniform reporting and comparison across studies.[2]

In the present study, **chronic uveitis was the most common clinical presentation (49.3%)**, followed by acute and recurrent forms. Chronic inflammation is known to be associated with prolonged disease course and higher risk of complications such as cataract, glaucoma, and cystoid macular edema.[10] Similar findings have been reported in previous studies, where chronic uveitis constituted a significant proportion of cases due to delayed presentation and persistence of inflammation.[3]

The study also demonstrated that **bilateral involvement (61.4%) was more common than unilateral disease**. Bilateral uveitis is often associated with systemic or immune-mediated conditions, whereas unilateral cases are more frequently linked to localized or infectious etiologies.[8] The predominance of bilateral involvement in this study may indicate the role of systemic inflammatory mechanisms in the pathogenesis of uveitis in this region.[13]

With respect to pathological classification, **non-granulomatous uveitis was more common (67.1%) compared to granulomatous uveitis**. Non-granulomatous inflammation is typically associated with acute anterior uveitis and immune-mediated conditions, while granulomatous uveitis is often linked to infectious or systemic diseases such as tuberculosis and sarcoidosis.[9] The predominance of non-granulomatous type in the present study is consistent with previous reports and reflects the common pattern of clinical presentation.[7]

The association between clinical course and laterality observed in the present study showed that **chronic uveitis was more frequently associated with bilateral involvement**, suggesting a possible link with systemic or immune-mediated causes. Previous studies have also highlighted that chronic and bilateral forms of uveitis often require long-term management and close follow-up.[11]

Advances in therapeutic modalities, including corticosteroids and newer immunomodulatory agents, have significantly improved the management of uveitis.[6] However, early recognition of clinical patterns remains essential for timely initiation of appropriate therapy and prevention of complications.[9]

Regional variations in the clinical profile of uveitis have been documented in several studies. In India, differences in environmental factors, infectious disease prevalence, and genetic predisposition contribute to variability in disease presentation.[12] Therefore, understanding the clinical pattern of uveitis in a specific region is important for developing a targeted diagnostic approach and improving patient outcomes.

The findings of the present study provide valuable insight into the **clinical profile and pattern of uveitis in Southern Rajasthan**, emphasizing the predominance of chronic, bilateral, and non-granulomatous forms. These observations may help clinicians in early diagnosis and effective management of uveitis in this region.

Conclusion

The present study demonstrates that **chronic uveitis was the most common clinical presentation**, with a predominance of **bilateral involvement and non-granulomatous type**. These findings highlight the importance of careful clinical evaluation for early diagnosis and appropriate management to prevent complications.

Limitations

This study was conducted at a **single tertiary care centre with a limited sample size**, which may limit generalizability. Additionally, the **cross-sectional design** does not allow assessment of long-term outcomes or disease progression.

Ethical Approval

Approved by the **Institutional Ethics Committee of R.N.T. Medical College and Associated Hospitals, Udaipur, Rajasthan, India**. Informed consent was obtained from all participants.

Conflict of Interest

The authors declare **no conflict of interest**.

Acknowledgement

We thank the **Department of Ophthalmology, R.N.T. Medical College, Udaipur**, and all study participants.

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