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Original Research Article

Prevalence and demographic insight of uveitis in OPD patients at a tertiary eyecare centre of Uttarakhand

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Abstract

Background: This study aimed to investigate the prevalence, etiological and anatomical classifications, laterality, and associated risk factors of uveitis, with particular emphasis on gender distribution and hygiene-related influences. The objective was to highlight the significance of a multidisciplinary approach in managing the diverse and potentially severe complications of uveitis, ranging from vision loss to enucleation.

Materials and Methods: This prospective cohort study, conducted at the eye OPD of Dr. Sushila Tewari Government Hospital and Medical College in Haldwani, Uttarakhand, provides a comprehensive analysis of uveitis. It examined parameters such as demographics, aetiology, anatomy, clinical and pathological features, ocular laterality, hygiene, and ocular disease, excluding penetrating ocular injuries, corneal ulcers, intraocular surgeries, and masquerade syndromes. The sample size of 320 was observed from May 2023 to May 2024, including 125 male and 195 female participants. The study utilised percentage, mean, standard deviations, p-value (≤0.05) and chi-square test. Data were piled up in Microsoft Excel 2010 and evaluated using SPSS version 29.0.01.

Results: The study, conducted on over 320 patients, revealed that quadragenarian (41 to 50 years) adult females, 68 individuals (34.87%), are more susceptible to uveitis. The most common forms of the disease identified in females were idiopathic uveitis, 86 cases; (44.10%), anterior uveitis, 101 cases; (51.78%), the acute form 173 cases; (88.71%), and non-granulomatous uveitis, 169 cases; (86.60%), unilateral involvement was 153 cases; (78.46%). Additionally, for individuals having poor hygiene, 69 cases (61.60%) were significantly associated with a higher prevalence of the disease.

Conclusion: This study underscores the importance of gender-specific analysis and hygiene-related risk factors in uveitis management. The findings advocate for a comprehensive, multidisciplinary strategy to address the varying etiologies and complications of uveitis effectively, aiming to reduce its long-term visual and ocular morbidity. Nonetheless, continued research is essential to refine and optimise treatment strategies.

Keywords: Uveitis, HLA B-27, Iritis, Cyclitis, Synechiae, Festooned pupil, Non-granulomatous, Granulomatous, Hypopyon.

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1. Introduction

Before the 20th century, uveitis was referred to as “ophthalmia”, an inflammation occurring within the eye, affecting the uveal tissue and stemming from various causes. The uveal tissue includes the iris, ciliary body, and choroid, the middle vascular structures of the eye, therefore commonly referred to as iritis, anterior cyclitis, and iridocyclitis. Acute anterior uveitis (AAU) is the most common form that can

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lead to mild to moderate vision loss, significantly impacting overall ocular health either through inflammation or macular oedema, glaucoma, cataracts, and other issues. Morbidity linked with the illness is fairly high.[1-5] (**Figure 1**)

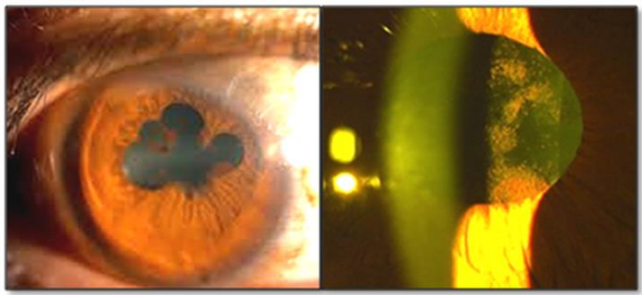

Figure 1: Festooned pupil due to the posterior synechiae and the optical section on slit lamp showing pigment dispersal over the anterior surface of the crystalline lens

Uveitis can be caused by an infectious agent or trauma, but it is predominantly thought to be autoimmune. Uveitis is a frequently isolated condition; it can also be connected to other health issues. In anterior uveitis, no associated condition or syndrome is usually found except for HLA-B27, which can be linked to ocular inflammation either alone or in conjunction with systemic disease.[2-6]

HLA-B27 positive acute anterior uveitis (AAU) typically presents with distinct clinical features: a higher prevalence in males. HLA-B27 positive AAU is characterised by an acute onset with a unilateral alternating pattern, a non-granulomatous appearance, and frequent recurrences. In contrast, HLA-B27-negative AAU typically presents with an equal male-to-female ratio, a chronic bilateral course, and a higher likelihood of granulomatous features. Additionally, in Asian countries, rheumatoid arthritis is a significant condition associated with uveitis.[1,7,8]

Uveitis is classified anatomically into anterior, intermediate, posterior, and panuveitis. Anterior uveitis encompasses iritis and iridocyclitis, which may present as a single episode resolving with appropriate treatment or develop into a recurrent or chronic condition. Intermediate uveitis, also called pars-planitis, is characterised by vitritis and may include snowbanking—accumulation of inflammatory material on the pars plana—or snowballs, which are inflammatory cell aggregates in the vitreous. Posterior uveitis, or chorioretinitis, involves inflammation of the retina and choroid. Panuveitis refers to inflammation affecting all layers of the uvea.[1,3,9,10]

Clinically, if the symptoms arise <3 Months, disease severity is defined as acute uveitis, and if symptoms present for 3 months or more, it is named chronic uveitis. Recurrent uveitis is named if two or more episodes of inflammation are separated by a disease-free period. Pathologically, uveitis is classified as suppurative or purulent uveitis, characterised by hypopyon. The non-suppurative is further classified into granulomatous and non-granulomatous. The granulomatous type has the features of large keratic precipitates, including pupillary margin nodules, called Koeppe nodules and on or within the anterior iris stromal nodules, called Busacca nodules.[11,12]

The aetiological classification includes –[10,13-23]

1. Infectious uveitis concerning 1. Bacterial- Cat-scratch disease (Bartonella *henselae*) and Tuberculosis (Mycobacterium), 2. Spirochete- Lyme disease (Borrelia *burgdorferi*) and Syphilis (Treponema *pallidum*), 3. Viral- Herpes simplex, Cytomegalovirus (CMV), and HIV, 4. Fungal- (Candida *albicans*, Aspergillus, and Fusarium), 5. Parasitic- Toxoplasmosis, (Toxoplasma *gondii*) and Toxocariasis (Toxocara *canis* or Toxocara *cati*)
2. Immunity-based uveitis is the most common but still not clearly defined. The Microbial Allergic Uveitis is caused by infections such as tuberculosis (TB), dental infections, paranasal sinus infections, tonsillitis, prostatitis, and genital or urinary tract infections. Anaphylactic Uveitis occurs in conjunction with systemic anaphylactic reactions. The Atopic Uveitis triggered by airborne allergens, including pollen, house dust, and animal dander from pets like dogs, cats, and birds and the Autoimmune Uveitis develops due to autoimmune conditions such as Still's disease (systemic juvenile idiopathic arthritis), rheumatoid arthritis (a chronic autoimmune joint disease), Wegener's granulomatosis (a rare vasculitic disorder), systemic lupus erythematosus (an autoimmune disease affecting multiple organs), Reiter's syndrome (inflammatory arthritis following infections from pathogens like *Salmonella*, *Shigella*, *Yersinia*, *Campylobacter*, or certain sexually transmitted. The Human Leucocyte Antigen associated Uveitis develops in ankylosing spondylitis(HLA-B27), Behcet's syndrome (HLA-B5) and Vogt-Koyanagi-Harada (HLA-DR4 & HLA-DR15) disease.
3. Toxic uveitis is caused by the liberation of endotoxin or exotoxin of invading pathogens.
4. Traumatic uveitis due to the operative and other injuries.

The unknown cause of uveitis might be linked to syndromes known as white dot syndromes, which encompass diagnoses such as acute posterior multifocal placoid pigment epitheliopathy, birdshot chorioretinopathy, multifocal choroiditis and panuveitis, multiple evanescent white dot syndrome, punctate inner choroiditis, serpiginous choroiditis, and acute zonal occult outer retinopathy. Additionally, masquerade syndromes involving the presence of intraocular cells, having no concern with immune-mediated uveitis and are categorised into neoplastic, including retinitis pigmentosa, intraocular foreign body, juvenile xanthogranuloma, and retinal detachment, and non-neoplastic conditions include retinoblastoma, lymphoma,

malignant melanoma, leukaemia, and reticulum cell sarcoma.[10]

The symptoms of anterior uveitis include pain, redness, blurred vision, photophobia, and an irregular pupil with clinical signs of dilated ciliary vessels, anterior chamber cell flaring, keratic precipitates, hypopyon in severe cases, anterior and posterior synechiae, festooned pupil, and pigment deposition on the lens. In granulomatous forms, the iris surface may show inflammatory Busacca nodules, as seen in Fuchs heterochromic iridocyclitis. Intermediate uveitis typically affects one eye and presents symptoms such as floaters and blurred vision, with pain and photophobia being less common. Posterior uveitis involves inflammation of the entire ocular tissue and is characterised by floaters and blurred vision.[11,12,23]

Poor hygiene, poor socioeconomic status, poverty, overcrowding, limited formal and public education and definite medical resources may be a contributing risk factor for the infectious type of uveitis, however, it is not a primary cause of the condition overall, studies in some populations have shown an association between poor hygiene and a higher prevalence of ocular infections that can lead to uveitis, especially in developing regions. A serious issue of microbial keratitis comes from poor contact lens hygiene may cause uveitis.[24-26]

2. Material and Methods

This is a prospective, cross-sectional and randomised study based on the signs and symptoms of anterior uveitis, conducted at the eye OPD of Dr Sushila Tewari Government Hospital and Medical College, Haldwani, Uttarakhand. The sample size was 320 and observed from May 2023 to May 2024; the male participants were 125, and the female participants were 195, further distributed in four age groups ranging from 21 to 60 years for both genders. The prevalence is checked under two subgroups of genders for demographic study, aetiological factors, anatomical factors, clinical factors, pathological factors, bilateral or unilateral involvement and the effect of hygiene, impacting uveitis.

Statistically, sample size is estimated by the formula n = (Zα/2+Zβ)2 *2*σ2 / d2, includes 95% confidence level (α is 0.05 with the critical value of 1.96), Zβ is the critical value of the Normal distribution at β (with the power of 80%, β is 0.2 with the critical value of 0.84), σ2 is the population variance, and d is the hypothesised difference to detect (10). The sample size for both groups is estimated at 320. Data were compiled using Microsoft Office (Excel) 2010 and exported to SPSS version 29.0.01 (IBM SPSS) for analysis.

The applied statistical calculation includes percentage, mean, and standard deviations and chi-square test, used to check two categorical variables for their independence or not with a significance level of ≤0.05.

Penetrating ocular injuries, corneal ulcers, intraocular surgeries and Masquerade syndromes are excluded from the study, while anatomical factors, anterior, intermediate, posterior and panuveitis, and etiological factors, idiopathic, infectious, immunity compromised, toxic and traumatic uveitis are included in the study. The clinical case sheet was filled for systemic conditions, history, parameters and related vitals of the patient. The ocular examinations are conducted by the slit lamp, visual acuity is noted by Snellen's visual acuity drum and refraction is completed by objective (streak retinoscopy) and subjective methods according to the unilateral or bilateral disease impact.

The aetiological diagnosis is classified for history, clinical features and laboratory investigations. The anterior uveitis for idiopathic aetiology is considered if it has no connection with laboratory investigation, other defined clinical syndromes and etiological involvement. The pathological investigations included complete blood cell count, Mantoux test, serological tests for syphilis, HIV, and rheumatoid factor and radiological investigations for chest X-ray, lumbosacral and knee joints. Whenever needed, other special investigations were considered by the medicine department of the same institution.

3. Result

This study includes 320 sample sizes, among them, male subjects were 125 (39.06%) and female subjects were 195 (60.94%). The age groups and both genders are studied within the four subgroups. The first age group represents 21 to 30 years, having 33(10.31%) samples, among them, 15(12%) were males, and 18(9.2%) were females. The second age group represents 31 to 40 years, having 91(28.43%) samples, among them, 29(23.2%) were males, and 62(31.79%) were females, third age group represents 41 to 50 years having 103(32.18%) among them 35(28%) were males and 68(34.87%) were females and fourth age group represents 51 to 60 years having 93(29.06%) samples, among them 46(36.8%) were males and 47(24.10%) were females. The mean ± St. Dev of different age groups is 31.77±3.48, and the median is 92. The chi-square test value is 7.88, and the p-value is 0.048, showing strong significance between age groups and both genders. (**Table 1**)

The different factors of aetiological classification are studied under the five subgroups. The first group of Idiopathic uveitis includes 128(40.0%) samples comprising 42(33.6%) males and 86(44.10%) females. The second group of Infectious uveitis includes 94(29.37%) samples comprising 32(25.6%) males and 62(31.79%) females. The third group of immuno-compromised uveitis includes 11(3.43%) samples comprising 5(4.0%) males and 6(3.07%) females. The fourth group of toxic uveitis includes 12(3.75%) samples comprising 7(5.6%) males and 5(2.5%) females and the fifth group of traumatic uveitis includes 75(23.43%) samples comprising 39(31.2%) males and 36(18.46%) females. The mean ± St. Dev of different age groups is

51.55±5.64, and the median is 75. The chi-square test value is 10.43 and the p-value is 0.033, showing good significance between aetiological classification and both genders. (**Table 2**)

Table 1: Analytical details for age groups and gender

Different age groups and genders				
Age Group	**Male**	**Female**	**Total**	**Significance**
21-30	15 (12%)	18 (9.2%)	33 (10.31%)	*p*-value 0.048
31-40	29 (23.2%)	62 (31.79%)	91 (28.43%)	chi-square test 7.88
41-50	35 (28%)	68 (34.87%)	103 (32.18%)	
51-60	46 (36.8%)	47 (24.10%)	93 (29.06%)	
Total	125 (39.06%)	195 (60.94%)	320 (100%)	

Table 2: Analytical concern of different aetiological factors of uveitis with both genders

Aetiological Factors & Genders				
Factors	**Male**	**Female**	**Total**	**Significance**
Idiopathic Uveitis	42 (33.6%)	86 (44.10%)	128 (40%)	*p*-value 0.033771
Infectious Uveitis	32 (25.6%)	62 (31.79%)	94 (29.37%)	
Immuno Compromised Uveitis	5 (4%)	6 (3.07%)	11 (3.43%)	chi-square test 10.4303
Toxic uveitis	7 (5.6%)	5 (2.5%)	12 (3.75%)	
Traumatic Uveitis	39 (31.2%)	36 (18.46%)	75 (23.43%)	
Total	125 (39.06%)	195 (60.94%)	320 (100%)	

Table 3: Analytical correlation of anatomical factors of uveitis with both genders

Different Anatomical Factors & Genders				
Factors	**Male**	**Female**	**Total**	**Significance**
Anterior uveitis	77 (61.6%)	101 (51.78%)	178 (55.62%)	p-value 0.024073
Intermediate Uveitis	45 (36%)	85 (43.6%)	130 (40.62%)	
Posterior uveitis	2 (1.6%)	7 (3.6%)	9 (2.82%)	chi-square test 9.4313
Pan uveitis	1 (0.8%)	2 (1.02%)	3 (0.94%)	
Total	125 (39.06%)	195 (60.94%)	320 (100%)	

The different factors of anatomical classification are studied for uveitis under four subgroups. The first group represents anterior uveitis with a strength of 178(55.62%) and further distribution of 77(61.6%) for males and 101(51.78%) for females, the second group represents intermediate uveitis with a strength of 130(40.62%) and distributed 45(36%) for males and 85(43.6%) for females. The third group represents posterior uveitis with a strength of 9(2.82%) and was distributed 2(1.6%) for males and 7(3.6%) for females. The fourth group represents pan uveitis with a strength of 3(0.94%) and distributed 1(0.8%) for males and 2(1.02%) for females. The mean ± St. Dev of different age groups is 86.13±9.43, and the median is 75. The chi-square test value is 9.43, and the p-value is 0.024, showing good significance between age anatomical classification and both genders. (**Table 3**)

The clinical factors are studied for uveitis in 3 subgroups: acute, chronic and recurrent. The first group represents acute uveitis with a strength of 270(84.37%) and further distribution of 97(77.6%) for males and 173(88.71%) for females, the second group represents chronic uveitis with a strength of 36(11.25%) and distributed 20(16%) for males and 16(8.20%) for females. The third group represents recurrent uveitis with a strength of 14(4.3%) and distributed 8(6.4%) for males and 6(3.07%) for females. The mean ± St. Dev of different age groups is 14.87±15.54, and the median is 36. The chi-square test value is 7.15, and the p-value is 0.027, showing good significance between different factors of clinical classification and both genders. (**Table 4**)

The different pathological factors for the non-suppurative type of uveitis are studied under two subgroups named non-granulomatous and granulomatous. The first group represents non-granulomatous with a strength of 256(80%) and further distribution of 87(69.60%) for males and 169(86.60%) for females, the second group represents granulomatous uveitis with a strength of 64(20%) and distributed 38(30.40%) for males and 26(13.33%) for females. The mean ± St. Dev of different age groups is 135.76±14.87, and the median is 160. The chi-square test value is 13.86, and the p-value is 0.00019, showing very strong significance between different factors of pathological classification and both genders. (**Table 5**)

The involvement of the eyes (ocular laterality) with both genders is studied within the two subgroups, named unilateral and bilateral. Among the total 320 sample size, unilateral involvement has a count of 229 (71.56%) encountering males 76 (60.8%) and females 153(78.46%), while bilateral involvement has a count of 91(28.43%) encountering males 49(39.2%) and female 42(21.53%). The mean ± St. Dev of involvement of the eye is 97.58±10.69 with a median of 160. The chi-square test value is 11.67, and the p-value is 0.00063, showing strong significance between involved eyes and both genders. (**Table 6**)

Table 4: Analytical details of different clinical factors and genders

Different clinical factors & genders				
Factors	**Male**	**Female**	**Total**	**Significance**
Acute Uveitis	97 (77.6%)	173 (88.71%)	270 (84.37%)	p-value 0.02798
Chronic Uveitis	20 (16%)	16 (8.20%)	36 (11.25%)	
Recurrent Uveitis	8 (6.4%)	6 (3.07%)	14 (4.3%)	chi-square test 7.1525
Total	125 (100%)	195 (100%)	320 (100%)	

Table 5: Tabulation of pathological factors and genders

Different Pathological Factors & Genders				
Factors	**Male**	**Female**	**Total**	**Significance**
Non granulomatous	87 (69.60%)	169 (86.60%)	256 (80%)	*p*-value 0.00019
Granulomatous	38 (30.40%)	26 (13.33%)	64 (20%)	chi-square test 13.866
Total	125 (100%)	195 (100%)	320 (100%)	

Table 6: Analytical details correlating ocular laterality with both genders

Ocular Laterality with Genders				
Factors	**Male**	**Female**	**Total**	**Significance**
Unilateral	76 (60.8%)	153 (78.46%)	229 (71.56%)	*p*-value 0.000633
Bilateral	49 (39.2%)	42 (21.53%)	91 (28.43%)	chi-square test 11.6755
Total	125 (100%)	195 (100%)	320 (100%)	

Table 7: Analytical details of hygiene with infectious uveitis

Hygiene and Uveitis				
Factors	**Affected with Infectious uveitis**	**Unaffected With Uveitis**	**Total**	**Significance**
Good Hygiene	43 (38.39%)	188 (90.38%)	231 (72.18%)	*p*-value 0.00001
Poor Hygiene	69 (61.60%)	20 (9.61%)	89 (27.81%)	chi-square test 98.01
Total	112 (35%)	208 (65%)	320 (100%)	

Infectious uveitis is concerned with general hygiene. It is studied under good and poor hygiene groups to make its correlation with infectious and noninfectious uveitis. The subjects who hadgood hygiene were 231(72.18%), among them infected with infectious uveitis, were 43(38.39%) and non-uveal infection 188(90.38%) Of the subjects with poor hygiene 89(27.81%) and among them 69(61.60%) were found affected with uveitis and 20(9.61%) were not affected by the uveitis. The mean ± St. Dev for the study of hygiene and infectious uveitis is 100.40±11.0, with a median of 160. The chi-square test value is 98.01, and the p-value is 0.00001, showing high significance. (**Table 7**)

4. Discussion

The diverse range of potential complications associated with uveitis from vision loss to enucleation. This prevalence study highlights the significance of multidisciplinary approaches to disease management. This prevalence study was conducted over 320 randomly selected patients, comprising 125 males and 195 females. The samples were studied under four age subgroups: 21-30, 31-40, 41-50, and 51-60. The study analysed etiological and anatomical classifications, laterality, and hygiene, comparing both genders.

In this study, males accounted for 125(39.06%), which is lower than the females represented of 195(60.94%). Among the sample of the study, the age group 41 to 50 years shows the highest number of cases, 103(32.18%), with the lowest accountability of males 35(28%) and the highest accountability of females 68(34.87%), the second maximum count was found in the age group of 51-60 for 93(29.06%) with the lowest involvement of males 46(36.8%) and the highest involvement of females 47(24.10%) representing with good significance.

Under the aetiological classification, idiopathic uveitis involves a total of 128(40.0%) subjects, among them, female involvement is high with 86(44.10%). Infectious uveitis includes 94(29.37%) subjects, showing higher involvement of females with 62(31.79%). Immunocompromised uveitis has a total count of 11(3.43%), whereas females dominate with 6(3.07%). The total scoring of toxic uveitis is about 12(3.75%), among them male dominates with 7(5.60%). The traumatic uveitis covers 75(23.43%) subjects, and among them, male dominates with a count of 39(31.2%). This correlation shows strong significance.

The anatomical classification reveals total issues of 178(55.62%) for Anterior Uveitis, with a higher incidence of 101(51.78%) of females. The Intermediate Uveitis scores at 130(40.62%), with the high dominance of females represented with a count of 85(43.6%). Posterior Uveitis includes 9(2.82%) subjects, with the dominance of females, with a count of 7(3.6%). The Pan Uveitis subjects counted for 3(0.94%), and again, females dominated with the count of 2(1.02%). This correlation also shows strong significance.

The laterality of the eye defines more common involvement for Unilateral 229 (71.56%), with the higher accountability of females 153(66.81%) than that of males 76(33.18%), and the bilateral involvement 91(28.43%)

shows more common in males 49(53.84%) than females 42(46.15%). This correlation exhibits strong significance.

Poor hygiene relatively defines a high prevalence of infectious uveitis by 69(61.60%), compared to good hygiene 43(38.39%), with the representation of very strong significance.

5. Limitations

Patients attending tertiary eye care centers are more likely to present with severe and complicated cases of uveitis. Many are referred from primary or secondary care facilities, leading to an over-representation of complex or chronic cases, while milder forms of uveitis treated at these levels often remain under-represented. As the study was conducted at a single tertiary centre, this introduces a limitation in terms of generalizing the prevalence of uveitis to the wider population of Uttarakhand. This may potentially skew both the demographic and clinical profiles observed. Furthermore, the cross-sectional design of the study captures data at a specific point in time, limiting the ability to assess incidence rates, disease progression, or long-term outcomes. Additionally, the lack of access to advanced immunological and imaging investigations may have contributed to inaccuracies in the etiological classification of certain cases.

6. Conclusion

The study on uveitis has illuminated the multifaceted nature of this ocular inflammatory condition, encompassing various forms. Some issues can be treated medically, while others may be managed by maintaining good hygiene. However, immunity-based issues are more challenging to address. Therefore, early diagnosis and treatment are crucial for achieving a good visual prognosis along with the management of uveitis, but further research is needed for the effective management of uveitis.

7. Source of Funding

None.

8. Conflict of Interest

The authors declare no conflict of interest.

9. Ethical Approval

Not required.

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References

1. Rathinam SR. CME Series. *Uveitis made simple: work up and management. Vol. 20*. Delhi: All India Ophthalmological Society; 2010. p. 1–42.
2. Intraocular inflammation and uveitis [Internet]. EntoKey. Available from: https://entokey.com/4-intraocular-inflammation-and-uveitis
3. Martin TM, Smith JR, Rosenbaum JT. Anterior uveitis: current concepts of pathogenesis and interactions with the spondyloarthropathies. *Curr Opin Rheumatol*. 2002;14(4):337–41.
4. Jarwal P. A clinical study of anterior uveitis at India. *TNOA J Ophthalmic Sci Res*. 2021;59(3):265–9.
5. Rathinam SR, Namperumalsamy P. Global variation and pattern changes in the epidemiology of uveitis. *Indian J Ophthalmol.* 2007;55(3):173–83.
6. Larson T, Nussenblatt RB, Sen HN. Emerging drugs for uveitis. *Expert Opin Emerg Drugs*. 2011;16(2):309–22.
7. Jabs DA, Nussen blatt RB, Rosenbaum JT. Standardization of Uveitis Nomenclature (SUN) Working Group. Standardization of uveitis nomenclature for reporting clinical data. Results of the First International Workshop. *Am J Ophthalmol.* 2005;140(3):509–16.
8. Chandra M, Koul P, Singh J, Dubey G, Srivastava N. Unconventional interventions leading to anterior uveitis: a case report on the removal of a corneal foreign body by a non-medical person. *Int J Health Sci Res*. 2024;14(7):229–34.
9. "Uveitis". *Wikipedia*. Wikimedia Foundation, 6 August 2025. Available from: https://en.wikipedia.org/wiki/Uveitis
10. Babu BM, Rathinam SR. Intermediate uveitis. *Indian J Ophthalmol*. 2010;58(1):21–7.
11. Suzuki J, Oh I, Kezuka T, Sakai J, Goto H. Comparison of patients with ocular tuberculosis in the 1990s and the 2000s. *Jpn J Ophthalmol*. 2010;54(1):19–23.
12. Cutrufello NJ, Karakousis PC, Fishler J, Albini TA. Intraocular tuberculosis. *Ocul Immunol Inflamm*. 2010;18(4):281-91.
13. Gupta A, Bansal R, Gupta V, Sharma A, Bambery P. Ocular signs predictive of tubercular uveitis. *Am J Ophthalmol*. 2010;149(4):562–70.
14. Isogai E, Isogai H, Kotake S, Yoshikawa K, Ichiishi A, Kosaka S, et al. Detection of antibodies against Borrelia burgdorferi in patients with uveitis. *Am J Ophthalmol*. 1991;112(1):23–30.
15. Karma A, Seppala I, Mikkila H, Kaakkola S, Viljanen M, Tarkkanen A. Diagnosis and clinical characteristics of ocular Lyme borreliosis. *Am J Ophthalmol.* 1995;119(2):127–35.
16. Flach AJ, Lavoie PE. Episcleritis, conjunctivitis, and keratitis as ocular manifestations of Lyme disease. *Ophthalmology.* 1990;97(8):973–5.
17. Dunn JP, Jabs DA. Cytomegalovirus retinitis in AIDS: natural history, diagnosis, and treatment. *AIDS Clin Rev.* 1995–1996:99–129.
18. Jabs DA, Enger C, Bartlett JG. Cytomegalovirus retinitis and acquired immunodeficiency syndrome. *Arch Ophthalmol.* 1989;107(1):75–80.
19. Gupta A, Sharma A, Bansal R, Sharma K. Classification of intraocular tuberculosis. *Ocul Immunol Inflamm*. 2015;23(1):7–13.
20. Holland GN. Ocular toxoplasmosis: a global reassessment. Part I: epidemiology and course of disease. *Am J Ophthalmol.* 2003;136(6):973–88.
21. Holland GN. Ocular toxoplasmosis: new directions for clinical investigation. *Ocul Immunol Inflamm.* 2000;8(1):1–7.
22. Gillespie SH. Human toxocariasis. *Commun Dis Rep CDR Rev.* 1993;3(10):R140–3.
23. Kanski JJ, Bowling B. *Clinical ophthalmology: a systematic approach*. Edinburgh: Elsevier/Saunders; 2015.

24. Stellwagen A, MacGregor C, Kung R, Konstantopoulos A, Hossain P. Personal hygiene risk factors for contact lens-related microbial keratitis. *BMJ Open Ophthalmol*. 2020;5(1):e000476.
25. Jain D, Qamaruddin M, Tiwari R. Study of various causes of anterior uveitis. *Indian J Clin Exp Ophthalmol.* 2019;5(4):452–6
26. Rathinam SR, Namperumalsamy MS. Infectious uveitis: an Asian perspective. *Eye (Lond)*. 2018;33(1):50–65.

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