Symposium

Algorithmic approach in the diagnosis of uveitis

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Uveitis is caused by disorders of diverse etiologies including wide spectrum of infectious and non-infectious causes. Often clinical signs are less specific and shared by different diseases. On several occasions, uveitis represents diseases that are developing elsewhere in the body and ocular signs may be the first evidence of such systemic diseases. Uveitis specialists need to have a thorough knowledge of all entities and their work up has to be systematic and complete including systemic and ocular examinations. Creating an algorithmic approach on critical steps to be taken would help the ophthalmologist in arriving at the etiological diagnosis.

Key words: Algorithmic approach, differential diagnosis, naming and meshing, uveitis

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Uveitis is caused by disorders of diverse etiologies including wide spectrum of infectious and non-infectious causes. The inflammatory process primarily affects the uveal tissues with subsequent damage to the retina, optic nerve and vitreous. On several occasions, it reflects diseases that are developing elsewhere in the body and uveitis may be the first evidence of such systemic diseases, generating a challenge to the ophthalmologist in reaching the etiological diagnosis. Besides, because several entities share common clinical symptoms and signs, the etiological diagnosis may prove to be a difficult task.[1] Uveitis specialists need to have a thorough knowledge of all entities and their work up has to be complete including systemic and ocular examinations. In addition to the above mentioned challenges, India presents unique problems because of varying socio-economic, demographic and morbidity patterns. The prevalence and severity of diseases in economically deprived population differ from those in rest of the world[2] because of lack of good primary health care, poor affordability and poor compliance. Our ophthalmologist may also have to meet the added challenge of handling these problems in addition to managing uveitis *per se* The present chapter is to define an algorithmic approach in the diagnosis of uveitis. Algorithms solve problem by showing the critical pathways to be taken. Steps in building an Algorithm include the following:

- Defining the problem and deriving a clinical diagnosis by naming technique given by Nozik.[1]
- Reviewing all possible causes of the condition and comparing with existing known uveitis patterns also known as meshing technique.
- Proving the diagnosis by presenting diagnostic modalities in a logical manner.

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Etiological diagnosis of uveitis starts with the first step of elaborate history followed by systemic examination and ocular examination to reach a clinical conclusion. Subsequently list of differential diagnosis is created in order to decide on laboratory investigations to rule out or rule in the possible etiology. Sometimes other sub specialty consultation may be required such as rheumatologist, infectious disease specialist, pulmonologist or dermatologist.

History Taking

Uveitis work up starts with an elaborate history-taking.[1,3-6] Subsequently meticulous systemic and ocular examination will offer a clinical conclusion. It is estimated that over 70% of diagnosis can be made on the basis of detailed medical history and thorough clinical work up alone. Systemic history offer possible systemic disease association with ocular involvement. It is often the clinical acumen of the ophthalmologist that points out the diagnosis, that is further confirmed or ruled out by a tailored laboratory approach.[1] Table 1 shows the details that need to be collected for a thorough history taking. Description of each variable is given in detail below.

Age

Several conditions have a predilection for certain age groups. Juvenile arthopaties and parasitic uveitis are the most common entities in patients younger than 16 years of age.[7] In general uveitis secondary to infections is common in extremes of age and immunological diseases are common in middle age.[2] Some of the examples are:

- Children: Juvenile Rheumatoid Arthritis, Toxocariasis.
- Young adults: Behcet's, Human Leukocyte Associated antigen B27– associated uveitis, Fuch's uveitis.
- Old age: Vogt Koyanagi Harada's (VKH) syndrome, Herpes Zoster Ophthalmicus, Tuberculosis and Leprosy.

Gender

Several conditions have a predilection for specific gender as given below.[2]

- Males-Ankylosing spondylitis, Reiters, Behcet's, Sympathetic ophthalmia.

Table 1: History in uveitis

Demography
Age
Gender
Race
Residence
Occupation
Ocular history
Laterality
Primary symptom
Duration
Onset
Severity
Course
Associated findings
Systemic history
All systemic problem
Associated other diseases
Treatment history
A detail history on dosage of drugs that patient is already taking
Response to treatment
Treatment complications
Compliance of the patient
Miscellaneous
Injury
Surgery
Migration

Exposure to risk factors specific to the diagnosis, e.g.: Syphilis, HIV, leptospirosis, trematode eye disease

- Females-Rheumatoid arthritis, Juvenile Rheumatoid Arthritis.

Race

Demographic characteristics, such as race and ancestry, can be predispositions to the development of specific conditions, for example:

- Ankylosing spondylitis, Reiters – Caucausians.[1]
- Sarcoid-Pigmented race.
- VKH syndrome, Behcet's syndrome – Orientals.

Socio economic history

Recreational activities such as swimming in open water reservoirs may expose the individuals to water borne diseases that may eventually result in uveitis. The best example is leptospirosis and trematode granulomas. Patients who own dogs or cats or are handlers of these animals may be exposed to the intestinal parasites. Toxoplasma gondii and Toxocara canii occur after ingestion of contaminated food sources or contact with soil. Plumbers and sewer workers are at an increased risk of leptospirosis, which is transmitted by a spirochete in sewage water and urine of rats, cattle or other animals.[8] Some of the examples of zoonotic diseases are:

- Cat-Toxoplasmosis.
- Dog-Toxocariasis,
- Cattle-Leptospirosis, cysticercosis.
- Pigs-Cysticercosis, Leptospirosis.

Best examples to be concerned about exposure to risk factors include HIV related ocular disorders, leptospirosis and trematode granuloma in children.[9-12]

Systemic conditions

Collagen vascular disorders are best examples for non-infectious systemic disease which can cause severe ocular morbidity. Other examples include sarcoidosis, Behcet's syndrome, Reiter's syndrome and VKH syndrome. Tuberculosis, leprosy, syphilis are common systemic infections that can cause uveitis.[11] Other recently reported systemic infections such as Chikungunya and West Nile Virus diseases can also cause ocular inflammation.[13,14] Endogenous endophthalmitis is more common in diabetics, renal failure and immuno suppressed patients. In addition patients who received intravenous fluid prior to onset of uveitis may also suffer from endogenous endophthalmitis.

Ocular symptoms

Pain, redness and photophobia are the important symptoms for anterior uveitis, while floaters with or without decrease in vision is important for intermediate and posterior uveitis. Pain on ocular movement is seen in posterior scleritis or in orbital inflammatory diseases. Sudden bilateral loss of vision would indicate either VKH's syndrome or Sympathetic ophthalmia.[2-5]

Extraocular Examination

The physical signs of extra ocular disease can add evidence to support the etiological diagnosis. Frequently, the findings may have escaped recognition by the patient or, if recognized, may have been deemed insignificant. Thus, it is important for the ophthalmologist to routinely evaluate patients for evidence of extra ocular disease. Table 2 gives some examples of systemic clinical signs one may see in specific uveitis cases.

Ocular Examination

A comprehensive eye examination is a requirement for all patients with uveitis, beginning with an assessment of the patient's best-corrected visual acuity. A good day light examination and external examination with torch light is essential in every patient. Often clues on infectious diseases like Hansen's disease or Herpes can be obtained on adnexal examination. Common ocular signs that help in the diagnosis are given in Table 3.

Conjunctiva, episclera, sclera and pupillary examination

Examination of the anterior surface of the eye should first be performed in ambient illumination for subtle color differences. Inflammation of the conjunctiva and episclera appear bright red in daylight and more in the fornix. In cases of uveitis, the congestion of the perilimbal area is more than the palpebral and forniceal conjunctiva. Scleritis will present with dilation of deep vascular plexus which is better seen with red free illumination with tenderness on palpation. Examination of pupil gives clue regarding some of the etiological conditions and structural alterations as a result of inflammation.[1]

On slit lamp examination, uveitis can be classified either as granulomatous or non-granulomatous [causes mentioned in Table 4]. Rarely keratic precipitates (KP) may be uniformly distributed as seen in Fuch's uveitis, Possner Schlossman syndrome, sarcoid uveitis and lens induced uveitis.

Table 2: Systemic signs

Poliosis	Vogt Koyanagi Harada's syndrome, Sympathetic ophthalmia
Loss of hair	Systemic lupus erythematosus, Vogt Koyanagi Harada's syndrome, and Syphilis
Hypo-pigmentation of the skin	Leprosy, sympathetic ophthalmia, and Vogt Koyanagi Harada's syndrome
Rash	Vasculitic disease, systemic lupus erythematosus, Adamantiates Behcet's disease, Syphilis
Erythema nodosum-tender violaceous subcutaneous nodules in lower extremities	Inflammatory bowel disease, Sarcoidosis, tuberculosis, and Behcet's disease
Scaling of the skin	Systemic lupus erythematosus, psoriatic arthritis, Syphilis, and Reiter's syndrome
Discoid lesions	Systemic lupus erythmatosus, Sarcoidosis, leprosy and tuberculosis
Nail abnormalities	Psoriatic arthritis, Reiter's syndrome, and vasculitis
Oral and genital lesions	Behcet's disease, Reiter's and syphilis
Oral ulcers alone	Systemic lupus erythematosus and inflammatory bowel disease
Urethral discharge	Reiter's syndrome, syphilis, herpes simplex, and gonococcal urethritis
Epididymitis	Behcet's disease, Tuberculosis
Prostatitis	Reiter's syndrome, ankylosing spondylitis, and gonococcal disease
Nephritis	vasculitis (Wegener's granulomatosis SLE, Behcet) sarcoidosis, tuberculosis
Arthralgias and arthritis	Seronegative spondyloarthropathies, juvenile rheumatoid arthritis, Behect's, sarcoidosis, systemic lupus erythematosus, relapsing polychondritis leprosy reactions
Cartilage loss	Relapsing polychondritis, syphilis, and gonococcal disease, leprosy, Wegener's granulomatosis
Nasopharyngeal manifestations including sinusitis	Wegener's granulomatosis, sarcoidosis, Whipple's disease, and mucormycosis.
Bladder (cystitis)	Whipple's disease and Reiter's disease
Lymph nodes	Tuberculosis, sarcoidosis, lymphoma
Neuropathy	Leprosy, Herpes zoster, sarcoidosis, multiple sclerosis, syphilis, and sarcoidosis
Hearing loss	Vogt Koyanagi Harada's syndrome sarcoidosis
Respiratory symptoms	Tuberculosis, sarcoidosis, Wegener's granulomatosis (sinusitis)
Bowel disease	Whipples disease, Crohn's disease, ulcerative colitis
Fever	Collagen vascular disease, tuberculosis leptospirosis

SLE: Sytemic Lupus Erthematosus

Anterior chamber reaction

The presence of cells and flare in the anterior chamber is a marker for inflammation of iris and ciliary body. The field size recommended for examination is a slit beam of 1 mm by 1 mm for the grading of anterior chamber cells and flare.

Table 3: Ocular signs

Anatomical location	Condition
Forehead and adnexa	
Vesicles	Herpes zoster ophthalmicus
Poliosis	VKH
Nodules	Sarcoid, Leprosy
Madarosis	Leprosy
Conjunctiva	
Granulomas	Forigen body granulomas
	Sarcoid
Cornea	
Dendritic keratitis,superficial punctate keratitis	Viral uveitis
Sclero kerato uveitis	Syphilis, tuberculosis, Hansen's and viral
Exposure and neurotropic keratitis	Leprosy
Band keratopathy	Juvenile rheumatoid arthritis, sarcoidosis
Iris/pupil	
Miotic and irregular pupils	Posterior synechiae (but the response of the pupil to light and near is symmetric)
Relative affarent pupillary defect	Asymmetric disc involvement as a result of disc edema due to uveitis or optic atrophy as a result of chronic uveitis
Sectoral iris atrophy	Herpetic uveitis (irregular constriction of pupil)
AR pupil	Neurosyphilis
Gonioscopic evaluation	
Peripheral Anterior Synechiae	Sarcoid, Tuberculosis
Iris nodules	Sarcoid, Tuberculosis
Hyphema	Herpetic
Foreign body	Traumatic uveitis

VKH: Vogt Koyanagi Harada's, AR: Argyll Robertson Pupil

The SUN* Working Group Grading Scheme[15] for anterior chamber cells and flare:

Anterior chamber cells	
Grade	Cells in Field†
0	<1
0.5+	1-5
1+	6-15
2+	16-25
3+	26-50
4+	>50
Flare gives evidence of only previous inflammation or breakdown of blood aqueous barrier.	
Flare	Description
0	Complete absence
1+	Faint flare (barely detectable)
2+	Moderate flare (iris and lens details clear)
3+	Marked flare (iris and lens details hazy)
4+	Intense flare (fixed coagulated aqueous humor with considerable fibrin)

*Standardization of uveitis nomenclature (SUN)

Iris

Examination of iris may include the presence of posterior

Table 4: Causes of non-granulomatous and granulomatous uveitis

Non-granulomatous uveitis	Granulomatous uveitis
Sero-negative arthropathy and uveitis	Tuberculosis
Traumatic	Sarcoidosis
Behcets syndrome	Syphilis
Leptospirosis	Leprosy
EarlySarcoidosis	Herpetic
Early tuberculosis	VKH
Early Syphilis	Sympathetic ophthalmia
	Lens induced uveitis
	Parasitic
	Viral
Non-granulomatous unilateral uveitis	Non-granulomatous bilateral uveitis
HLA B27 uveitis	Leptospirosis
Traumatic uveitis	Behcet's, syndrome
Behcet's, syndrome	TINU
Fuch heterochromic uveitis	
Leptospirosis	
Drug induced uveitis	
Unilateral granulomatous uveitis	Bilateral granulomatous uveitis
Viral anterior uveitis	Vogt Koyanagi Haradas syndrome
Lens induced uveitis	Sympathetic ophthalmia
Sarcoid	Sarcoid
Syphilis	Syphilis
Tuberculosis	Tuberculosis
Parasitic	Phaco anaphylaxis

VKH: Vogt Koyanagi Harada's, TINU: Tubulo Interstitial Nephritis Uveitis syndrome, HLA: Human Leukocyte Antigen

synechiae which when extensive may produce seclusio pupillae, sometimes leading to formation of iris bombe and angle-closure glaucoma. Iris atrophy is a diagnostic feature of herpetic uveitis. Varicella zoster virus generally produces sector iris atrophy due to a vascular occlusive vasculitis, whereas herpes simplex virus usually produces patchy iris atrophy. Other causes of atrophy include anterior segment ischemia, Hansen's disease, trauma and previous attacks of angle-closure glaucoma. Granulomas may be prominent in the iris stroma or the choroid. Iris nodules are most commonly seen at the pupillary margin are described as Koeppe's nodules whereas those on the surface of iris are called as Busacca's nodules. Sarcoidosis, tuberculosis, VKH syndrome, sympathetic ophthalmia and syphilis can show iris nodules. Normal radial iris vessels can be seen dilated in acute inflammation producing iris hyperemia as in rubeosis irides; however, they disappear when inflammation is controlled. Hetero-chromia of iris can be either hypochromic (abnormal eye is lighter than fellow eye) as seen in Fuch's heterochromic iridocyclitis or hyperchromic (abnormal eye is darker than fellow eye) as seen in melanosis of iris.

Anterior chamber angle

Gonioscopic evaluation may reveal peripheral anterior synechiae sufficient to account for elevated intraocular pressure (IOP). Additionally, one may find angle KP, a small hypopyon which was invisible on slit lamp examination, and inflammatory debris, suggesting an additional mechanism of IOP elevation from occlusion of filtering trabecular meshwork. Abnormal iris vessels, neovascularization or fine branching vessels as seen in Fuch's heterochromic iridocyclitis, are easily identified by gonioscopy, and their presence can direct appropriate therapy. In cases in which traumatic uveitis is suspected, angle recession and presence of foreign body may be seen.

Lens

Important lenticular findings include cataract. The most common type of cataract in uveitis patients is the posterior subcapsular opacity. Anterior lens changes may also occur, often in association with lens capsule thickening at a site of iris adhesion. Anterior lens opacities following extreme elevations in IOP (glaukome flecken) provide insight into a history of acute uveitis glaucoma.

Intraocular pressure

The IOP in patients with uveitis is most commonly decreased owing to impaired production of aqueous by the non-pigmented ciliary body epithelium.

The factors that can affect IOP include the accumulation of inflammatory material and debris in the trabecular meshwork, inflammation of the trabecular meshwork (trabeculitis), obstruction of venous return, and steroid therapy.

The causes of elevated IOP include:

- Posner-Schlossman's syndrome.
- Herpetic uveitis.
- Toxoplasmosis.
- Fuchs' heterochromic iridocyclitis.
- Sarcoidosis.
- Iridocyclitis with secondary angle closure glaucoma.

In patients with uveitis, anterior chamber reaction should be assessed before the instillation of fluorescein to prevent obscuration of anterior chamber details due to a greenish hue caused by the dye after penetrating the anterior chamber.

Indirect ophthalmoscopy

When initiating indirect ophthalmoscopy it is important to direct the illumination beam into the patient's eye without the concomitant use of the condensing lens. The red reflex is then evaluated in the primary position. This technique gradually allows the patient's retina to become light-adapted, before exposure to the strong concentrated light delivered by the condensing lens, thereby increasing patient's comfort and cooperation with the examination. More important is the valuable information that the examiner obtains if the quality and nature of the red reflex changes. For example, if there is an area of active chorioretinitis in one quadrant the red reflex is replaced by a yellowish reflex. If a choroidal hemorrhage or tumor is present in a given area the red reflex is dark only in that area. In addition this review of the red reflex may disclose highly elevated masses as well as intravitreal changes such as foreign bodies, membranes, and parasites.

Vitreous

In active vitritis, cells appear white and are evenly distributed between the liquid and formed vitreous. Old cells are small and pigmented, whereas debris tends to be pigmented but larger in size. Active cells can be found in locations that can be helpful diagnostically. A localized pocket of vitritis may suggest underlying focal retinal or retinochoroidal disease. Focal accumulation of inflammatory cells around vessels is seen in active retinal vasculitis. Inflammatory cells that accumulate in clumps (snow balls) may precipitate on to the inferior peripheral retina as seen in intermediate uveitis, associated with sarcoidosis. Cells may accumulate in the retrovitreal space following contraction of vitreous fibrils and posterior vitreous detachment.

Pars plana

Examination of the peripheral retina and pars plana for snowbanking usually requires scleral depression or use of a three-mirror Goldmann contact lens. Exudation, fibroglial band formation and revascularization are pathologic processes that occur at the pars plana.

Retina and choroid

Retinitis presents with a yellow-white appearance and poorly defined edges, often associated with hemorrhage and exudation. Involvement may be focal or multifocal. Retinal vasculitis is usually seen in retinitis and may be seen in Wegener's granulomatosis, Systemic Lupus Erythmatosus, viral retinitis including herpitic group of infections or newly recognized viruses including Chikungunya or West Nile virus infections[14,15] Phlebitis may be seen in Leptospirosis or Sarcoidosis.

Choroidal inflammation can also be focal or multifocal. It is not frequently associated with vitritis due to intact retinal pigment epithelial cells that prevents inflammatory cell migration. The inflamed choroid may appear thickened and prominent infiltrates and granulomas may be present. Decomposition of the retinal pigment epithelium can alter the permeability of the blood-ocular barrier, resulting in retinal detachment. It should be highlighted that tuberculosis and sacoidosis can cause both focal and multifocal choroiditis.

Optic disc

Optic disc inflammation can occur with or without other signs of uveitis. Optic disc involvement takes the form of papillitis or disc edema, neovascularization, infiltration, and cupping. Neovascularisation occurs in ischemic states and is characterized by fragile vessels that are easily ruptured. Sarcoidosis and leukemia can infiltrate the disc tissue, producing an appearance similar to papillitis. Optic neuritis can occur in multiple sclerosis.

Macula

Chronic inflammation can lead to the following pathologies at macula

- Cystoid Macular Edema.
- Macular lamellar holes.
- Retina Pigment Epithelial clumping.
- Choroidal Neo-Vascular Membrane
- Exudative macular detachment.

Systematic Work Up

Once history is taken and complete systemic examination is done, a specific name can be assigned to the clinical entity by using a set of descriptive terminologies in uveitis[1] [Table 5]. Descriptive name can now be compared to the known uveitis patterns. The above two steps are known as "Naming and Meshing Step."[1]

Probable list of etiologies or causes [Table 6a-e] are constructed and this is known as differential diagnosis (DD). After arriving at a DD we look for investigations to confirm or rule out the specific diagnoses. Table 7 is an algorithm showing systematic workup in uveitis. A comprehensive

Table 5: Descriptive terminologies in uveitis

Age	Severity
Paediatric	Mild
Young adults	Moderate
Geriatric	Severe
Chronology	Pathology
Acute	Non-granulomatous
Acute recurrent	Granulomatous
Chroni	
Anatomical	Pattern
Anterior	Focal
Intermediate	Multifocal
Posterior	
Retinitis	Disseminated
Choroiditis	Diffuse
Pan uveitis	
Laterality	Etiological
Unilateral	Infectious
Unilateral alternating	Immunologic
Bilateral	Traumatic
Symmetrically bilateral	Masquerade
Asymmetrically bilateral	Idiopathic

Table 6a: Causes of Anterior uveitis

Causes of Anterior uveitis: Ocular diseases		Causes of Anterior uveitis: Systemic diseases	
Non-infectious uveitis	Infectious uveitis	Non-infectious	Infectious
Traumatic	Herpetic	Seronegative arthropathy*	Tuberculosis
Lens induced	Tubercular	Sarcoidosis	Syphilis
Fuch's heterochromic uveitis	Parasitic	Masquerade syndrome	Leprosy
Post-operative Post-traumatic	Fungal infection	Collagen vascular disease	Leptospirosis

*HLA B 27 related uveitis, Ankylosing spondylitis, Reiters syndrome, Psoriatic arthropathy, Inflammatory bowel syndrome

Table 6b: Causes of posterior uveitis and pan uveitis

Bacterial	Fungal	Viral	Parasitic	Non-infections
Tuberculosis	Nocardia	CMV retinitis	Toxoplasmosis	Sarcoidosis
Syphilis	Asteroides	Herpes simplex	Toxocara canis	VKH
Lymes disease	Candidiasis	Herpes zoster	Cysticercosis	Sympathetic ophthalmia
Leptospirosis	Histoplasmosis	Chikungunya	Onchocerca volvulus	Behcets
Brucellosis	Cryptococcus neoformans	West nile virus		
Septic retinitis	Aspergillosis			

CMV: Cyto Megalo Virus, VKH: Vogt Koyanagi Harada's

Table 6c: Causes of retinal vasculitis

Bacterial	Viral	Vasculitis in Immunologic disorders	Vasculitis-Idiopathic uveitis
Leptospirosis	Measles (SSPE)	Systemic lupus erythematosus	Birdshot Retinochoroidopathy
Lymes disease	CMV	Polyarteritis Nodosa	GHPC
Bacterial Endophthalmitis	Herpes Simplex	Wegener's Granulomatosis	Multifocal choroiditis,
Tuberculosis	Herpes zoster	Sjogren's syndrome	pan uveitis syndrome
Syphilis	Miscellaneous	Giant cell arteritis	Fungal
Rickettsia	Chikungunya[13]	Takayasu's Disease	Candidiasis
	West nile virus[14]	Dermatomyositis	Parasitic
		Behcet's syndrome	Toxoplasmosis
		Multiple Sclerosis	Toxocarasis
		Relapsing Polychondritis	DUSN
		HLA-B27 associated uveitis	

SSPE: Subacute sclerosing panencephalitis, HLA: Human Leukocyte Antigen, DUSN: Diffuse Unilateral Subacute Neuroretinitis, GHPC: Geographic Helicoid Peripapillary Choroidopathy, CMV: Cytomegalovirus

Table 6d: Causes of retinal vasculitis according to size of vessels

Veins	Arteries	Capillaries
Sarcoidosis	Polyarteritis nodosa	Whipples disease
Behcets syndrome	Wegener granulomatosis	Crohns disease
Eales' disease	Systemic Lupus Erythematosus	Polychondritis
Multiple sclerosis	Syphilis	Behcets syndrome
Toxoplasmosis	West nile virus infection	Syphilis
Tuberculosis		Leptospirosis
Leptospirosis		

Table 6e: Causes of joint pain in ocular inflammation

Non-infectious	Infectious
Seronegative arthropathies	Leptospirosis
Juvenile rheumatoid arthritis	Syphilis
Collagen vascular diseases	Lymes disease
Wegener's granulomatosis	Tuberculosis
Behcet's syndrome	Erethema Nodosum Leprosum of Lepromatous.leprosy
	Chikungunya
	West nile virus infection

Table 7: Systematic work up

Descriptive naming	Example unilateral/bilateral: Granulomatous/non-granulomatous: Acute/chronic, Anterior/ Pan uveitis: mild or severe
↓	
Meshing	Comparison with the existing diagnosis
↓	
General and specific lab testing	To evaluate the patient for treatment; to rule in/rule out diagnosis
↓	
Specialist consultation	To confirm the systemic disease and start the treatment
↓	
Therapy	General and specific treatment
↓	
Follow-up	Evaluation for the course and effectiveness of treatment

Table 8: Differential diagnosis of various clinical signs in uveitis

Hypopyon
HLA B27 uveitis
Behcet's, syndrome
Leptospirosis
Phacolysis
Endophthalmitis
Post-operative uveitis
Leukemia
Hyphema
Fuch's heterochromic uveitis
Viral uveitis
Syphilis
Gonococcal uveitis
Leukemia
Irregular Anterior chamber depth
Iris cyst
Sub luxated lens
Peripheral anterior synechiae
Ruptured lens capsule with released cortex in one side
Ciliary body tumour
Iris atrophy
Viral uveitis (Herpes zoster and simplex)
Traumatic
Post-laser atrophy
Post-operative uveitis
Hansens uveitis
Fuch's heterochromic uveitis
Anterior segment ischemia
Essential Iris atrophy
ICE syndrome
Vitreous cells and opacities
Inflammatory cells
Red blood cells
Degenerated old cells
Pigments
Amyloidosis
Asteroid hyalosis
Synchysis scintillans
Malignant cells-Retino blastoma Leukemia lymphoma
Lens cortical material
Parasitic cyst
Foreign body
Macular edema
Pars planitis
HLA B27 related uveitis
Post-operative uveitis
Vogt koyanagi haradas syndrome
Sympathetic ophthalmia
Traumatic uveitis
Rarely Behcets syndrome
Posterior scleritis
(Table 8 Continued)
(Table 8 Continued)
Glaucoma in the absence of synechiae
Sarcoidosis
Toxoplasmosis
Viral uveitis
Fuch's heterochromic uveitis
Phaco anaphylaxis
Lens protein uveitis
Low Tension in uveitis
Bilateral exudative retinal detachment
Ciliary detachment
Retinal detachment induced uveitis
Ciliary shock in acute uveitis
Traumatic and perforated globe
Post-operative
Optic disc edema in uveitis
Vogt Koyanagi Harada's syndrome
Sympathetic ophthalmia
Leptospirosis
Pars planitis
Juxta papillary choroiditis
Multiple sclerosis
Neuro retinitis

HLA: Human Leukocyte Antigen, ICE: Iridocorneal Endothelial Syndrome

work up takes the clinician to the list of differential diagnosis [Table 8] and then to a laboratory work up before the treatment is finalised.

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