

Original Research Article

Adherence to Treatment Regimen in Uveitis Patients in a Tertiary Hospital in Orissa

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Abstract: Uveitis is a leading cause of ocular morbidity, most cases being idiopathic. The advent of steroid therapy has brought about drastic reduction in the incidence of ocular complications of uveitis. However, an array of side-effects comes along with the benefits of steroids. As noted in our study population, adverse effects of steroids range from increased intraocular pressure and cataract to systemic side-effects including peptic ulcer disease, adrenal suppression and psychosis, etc. Often a non-adherence to treatment regimen is a setback to patient management. Our cross-sectional study involved 84 patients of uveitis and data was analyzed in terms of course of disease and visual outcome. The study aims to report the result of improper counseling, noncompliance of patient to regimen, lack of follow-up and lack of referral to rheumatologist, before the sequelae of uveitis and steroid side effects set-in. The most common form of uveitis noted was acute anterior uveitis (72.61%) and most common diagnosis was Idiopathic and Ankylosing spondylosis (36.9% and 20.23% respectively). Most common factor affecting adherence to treatment was financial limitation (69.04%), prolonged duration of treatment (61.9%) and inadequate counseling (40.47%), others being quiescent phase of disease (14.28%), and miscellaneous other causes. Patients (32.14%) without complication at presentation and 11.9% with complications at presentation, who remained in follow up with ophthalmologist and rheumatologist attained better visual outcome (6/36- 6/6) and less uveitic sequelae or steroidal side-effects. Strict vigilance of patient dosing and titration as per clinical response, frequent follow-up, proper counseling, multidisciplinary management and shift to immunosuppressives resulted in good visual outcome and improved quality of life. Financial setback and inadequate understanding of the acuteness of disease and treatment were seen to have a major role in adherence to regimen in our region. Proper multidisciplinary approach would reduce the protracted course of disease and cost of treatment.

Keywords: Uveitis, Steroids, Adherence, Treatment, Counseling, Rheumatologist.

INTRODUCTION

Potent corticosteroid therapy can bring about a substantial improvement in visual function of patients with uveitis while avoiding the blinding sequelae of uveitis. In some patients however, the waxing and waning pattern of the disease requires prolonged treatment, which in turn and may have a myriad of side-effects, both ocular as well as systemic without significant visual outcome because of various factors. Hence, therapy with steroids requires a keen watch over its adverse effects. Remission of the ailment and achieving a good quality of life requires a lot more than just recovery from the symptoms. It requires monitored dosing, adherence of patient to prescribed regimen and to the primary

ophthalmologist, and a timely referral to the rheumatologist. It has been noted that uveitis frequently conceals the diagnosis of underlying systemic disease, out of which approximately 40% are identified as immune-mediated [1]. Its pathogenesis is often in alterations focused in extracellular organs, mainly related with the immunological system [2]. Hence, uveitis is an ocular morbidity but a systemic entity. It requires the help of the rheumatologist and rest of the medical fraternity along with the ophthalmologist for a satisfactory outcome. And hence a creation of uveitis units comprising both ophthalmologist and rheumatologist. However, despite the best of collaborative medical effort, what leads to failure in management of cases of uveitis, is to be analysed. The

purpose of this study is to report the causes of a non-adherence to treatment and the result of inadequate counselling, lack of follow-up and lack of referral to rheumatologist, at the same time stressing on the need of a collaborative multidisciplinary approach for management of uveitis. The logistical organization of assisting uveitis patients should be based on a close relationship between the ophthalmologist and the internist/rheumatologist [2].

MATERIALS AND METHODS

This is a cross sectional study of 84 uveitic patients in our hospital, over a period of two years. Except for patients with uveitis due to trauma, surgery and infective keratouveitis all patients with signs of uveitis were included in our study.

All patients were first examined by the ophthalmologist. A thorough ocular and systemic history was taken and a comprehensive ocular examination consisting of best corrected vision, slit lamp examination, fundoscopy, tonometry and other tests such as optical coherence tomography and intravenous fluorescein angiography was done as needed.

The patients were then presented to rheumatologist of the same hospital for evaluation and specific laboratory examinations required for provisional diagnosis under SUN working group nomenclature.

With the results of the history and clinical examination a provisional diagnosis was made and patient treated with topical and systemic steroids, topical cycloplegics and immunosuppressives, if required, as per the pattern of disease and grade of inflammation and then evaluated on frequent follow-up by the ophthalmologist and rheumatologist.

Ocular complications like steroid-induced and uveitis-induced glaucoma were treated with anti-glaucoma medications; complicated cataract underwent cataract extraction with synecholysis, under corticosteroid cover.

Patients with systemic complications were referred to respective specialties like internal medicine, psychiatry, gynecology apart from rheumatology.

RESULTS

This study included 84 patients presenting with acute and/or chronic uveitis. The most common form was acute anterior uveitis(72.61%) and most of these were idiopathic(36.9%) followed by HLA B27 associated uveitis(33.32%) like Ankylosing spondylitis, Inflammatory bowel syndrome, Psoriasis and Reiter’s, the most common being Ankylosing spondylitis (20.23%). Other forms were Intermediate uveitis (5.95%) including Idiopathic (2.38%), Tubercular (2.38%) and sarcoidosis (1.19%), and Posterior Uveitis (21.42%) which included Tubercular, Von Koyanagi Harada, Toxoplasmic, Vasculitis and Behcet’s Disease.

Table-1: Categories of uveitis patients in our study

	Percentage of total number of patients		Percentage of total number of patients		Percentage of total number of patients
Anterior Uveitis	72.61	Intermediate Uveitis	5.95	Posterior Uveitis	21.42
Idiopathic	36.90	Idiopathic	2.38	Tubercular	4.76
Anklyosing spondylitis	20.23	Tubercular	2.38	Vogt Koyanagi Harada syndrome	2.38
Inflammatory bowel disease	2.38	Sarcoidosis	1.19	Toxoplasmosis	3.57
Psoriasis	5.95			Vasculitis	8.33
Reiter’s	4.76			Behcet’s	2.38
Fuch’s heterochromic iridocyclitis	2.38				

The common vision obscuring sequelae of uveitis were occlusio pupillae(63.09%), complicated cataract(11.9%), increased intraocular tension(15.47%), macular edema(9.52%) and cystoid macular edema(4.76%) requiring laser and surgical intervention.

Posterior subcapsular cataract(30.95%) and increased intraocular tension(20.23%) were more commonly encountered than central serous retinopathy(4.76%) as ocular side effects of corticosteroids.

The common systemic side effects seen were weight gain with cushing's appearance (54.76%), acid peptic disease(51.19%), acne, hirsutism and striae(50%), impaired wound healing(40.47%), hypertension(42.85%), psychosis(4.76%), osteoporosis (9.52%), irregular menstruation (29.76%), benign intracranial hypertension(2.38%) which required referral to internal medicine, psychiatry, neurology and gynaecology department.

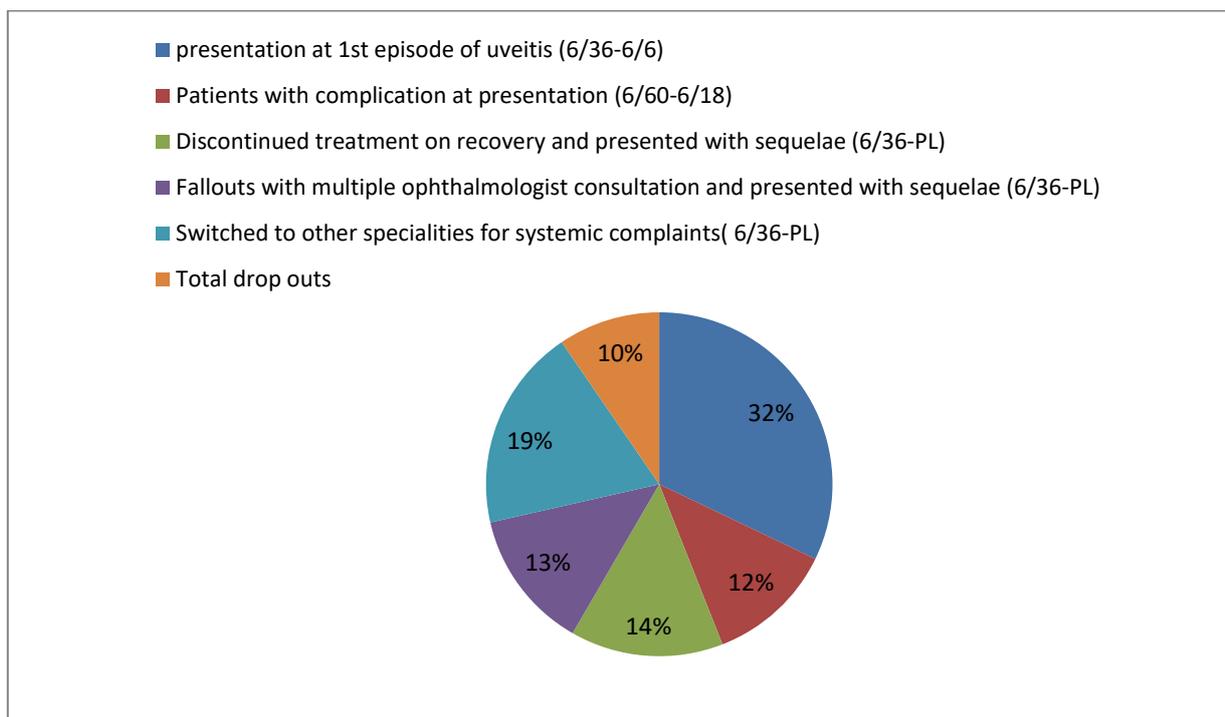
Table-2: Complications and Sequelae

Uveitic Sequelae (Percentage)		Ocular complications due to steroids (Percentage)		Systemic complications due to steroids (Percentage)	
Occlusio Pupillae	63.09	Posterior subcapsular cataract	30.95	Weight gain with cushingoid appearance	54.76
Complicated cataract	11.90	Increased intraocular pressure	20.23	Acid peptic disease	51.19
Increased intraocular pressure	15.47	Central serous retinopathy	4.76	Acne, hirsutism and striae	50.00
Macular edema	9.52			Hypertension	42.85
Cystoid macular edema	4.76			Impaired wound healing	40.47
				Benign Intracranial Hypertension	2.38
				Psychosis	4.76
				Osteoporosis	9.52
				Irregular menstruation	29.76

All 84 patients were treated conservatively with topical and systemic steroid and cycloplegics and referred to the rheumatologist for further evaluation and treatment. Twenty six of them required surgical treatment.

Twenty seven patients presented to us at the first episode of uveitis, of the rest 57 patients, 14.28% had discontinued treatment when symptomatically better, 13.09% kept on changing doctors with every recurrence but not referred to a rheumatologist at any visit, 19.04% switched to other specialities for systemic problems which were the effect of steroids.

Of the 27 patients who presented to us at the first episode and remained in follow up with the ophthalmologist and rheumatologist, attained a quiescent phase. Ten patients with recurrences and complications also achieved a long standing remission on collaborative management. The visual prognosis and quality of vision was better in patients with good adherence to regimen. Eight patients could not be traced back for follow-up, which we believe is due to economic issues and high cost of immunosuppressants.



Table/Chart - 3: Percentage of patients who had adherence to follow-up and their final visual outcome

Most common factor affecting adherence to treatment was financial limitation(69.04%), prolonged duration of treatment(61.9%) and inadequate counseling(40.47%), others being quiescent phase of disease(14.28%), and miscellaneous other causes. Patients (32.14%

without complication at presentation and 11.9 % with complications at presentation) who remained in follow up with ophthalmologist and rheumatologist attained better visual outcome (6/36- 6/6) and less uveitic sequelae or steroidal side effects.

Table - 4 : Factors affecting adherence

Disease related factors	Percentage	Patient related factors	Percentage	Regimen related factors	Percentage
Unpredictable prolonged duration	61.9	Low self esteem and depression	32.14	Prolonged duration	61.9
Younger age	41.6	Self treatment	27.38	Cost	57.14
Quiescent phase of disease	14.28	Inadequate counselling and lack of understanding the disease and treatment	40.47		
		Dissatisfaction with ophthalmologist or rheumatologist	17.85		
		Inadequate financial resources	69.04		
		Inadequate accessibility to treatment	42.85		

DISCUSSION

Corticosteroid therapy has transformed the scenario of Uveitis by bringing about a dramatic decrease in ocular sequelae of uveitis & a substantial improvement in vision. However, though steroids are a boon to uveitic patients, a keen watch is to be kept for its banes, for, loss of quality of life as a side-effect of any sight-saving treatment is definitely what is desirable to the ever expanding world of medical science. The common ocular side effects encountered with corticosteroids are cataract, increased intraocular tension and central serous retinopathy, while systemic side effects range from adrenal suppression, increased chances of infection, reactivation of tuberculosis, myopathy, impaired wound healing, osteoporosis, hypertension, weight gain, acid-peptic disease, psychosis, acne, hirsutism, striae to increased thrombosis [3]. Before initiating long term corticosteroids therapy one has to consider all the side effects of steroids and closely follow up and counsel the patient [4].

The adherence of the uveitic patient to treatment and follow-up is multifactorial. They can be categorized as factors related to disease (Duration and unpredictable exacerbation, younger age of patient, quiescent phase of disease), factors related to patient (Low self esteem and depression, lack of understanding of disease and treatment, dissatisfaction with treatment provider, inadequate financial resources and accessibility to treatment, and self treatment) and factors related to the regimen (Prolonged duration and required close monitoring for titration) [5]. The most common factor of non compliance of patients was found to be inadequate understanding of the disease and limited financial resources. Counselling along with increasing patient's self esteem, close supervision, administration of immunosuppressives, low dosing and documentation is necessary for increasing patient compliance.

Fonollosa *et al.* described in his study that joint medical attention can reach unusually high efficiency rates as it brings together a desirable matching in diagnostic-and sometimes therapeutic-procedures, mutual scientific learning which is of great value, and in addition the management of resources seems very adequate and economical. The ophthalmologists share their expertise in ocular examination allowing a pattern classification and an evaluation of the response to treatment, while

Rheumatologists fine tune diagnoses, adjust treatments, steroids, immunosuppressives, or biological agents as needed. A multidisciplinary team in which the ophthalmologist and the internist/rheumatologist are the main figures in the organization chart, should be completed with the cooperation of other specialists in the clinical area as well as from basic sciences for a complete work up and patients cost effectiveness [2].

We observed that 32.14% of patients without complication at presentation and 11.9 % with complications at presentation with extensive and proper counseling had a better adherence to treatment and follow up with the ophthalmologist and the rheumatologist, thereby achieving better visual outcome and quality of life with lesser hospital stay.

Hence the point being summarized here is that uveitis needs a multidisciplinary approach for satisfactory visual outcome. But that's not the only thing being stressed through our work. It aims to delve into the lacunas in implementation of a multidisciplinary approach and despite implementation of a joint-effort, what are the causes of failure in management of uveitis. Our work aims to throw light over these shortfalls and how to tackle them.

The small subject size and inability to follow paediatric rheumatological cases because of lack of referral to us were the limitations in our study and we would try to validate our point in future studies.

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