Clinical and Demographic Profile of Acute Anterior Uveitis: A Hospital Based Study

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ABSTRACT

Introduction: Uveitis is an inflammatory condition of uvea of eye. It is a sight threatening condition, so accurate and timely diagnosis and treatment is required. Acute anterior uveitis is characterised by eye pain or photophobia, circumlimbal redness and anterior chamber cells and flare.

Methods: This is a cross-sectional descriptive hospital record-based study based on data record in eye department of a tertiary care level centre in Kathmandu, Nepal. All cases of anterior uveitis presented to our OPD over one-year duration (December 2017- November 2018) were enrolled. Age, sex, co-morbidities and profile of uveitis like slit lamp findings were recorded.

Results: Total 52 cases of acute uveitis were observed during the study period. There were total 34 males and 18 females with eye involvement. Age group of the patients ranged from 19 to 79 years with median age of 36 years. Forty eight cases (92.3%) had unilateral involvement whereas only four cases (7.7%) had bilateral involvement. Keratic precipitates were seen in 44 patients. Majority of the patients had good vision; 65.4% in right eye and 69.2% in left eye.

Conclusions: Most of the anterior uveitis occur in male in third and fourth decade. The most common complaints of the patient were decreased vision, eye pain and red eye.

Key words: decreased vision; uveitis; Nepal

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INTRODUCTION

Uveitis is an inflammatory condition of middle vascular coat of the eye (uvea) and acute anterior uveitis is the commonest type. It causes blindness and visual impairment in a significant number of people in most communities.[1] Being a sight threatening condition accurate and timely diagnosis of anterior uveitis by proper examination and its appropriate management is of utmost importance.[2] Anterior uveitis is associated with HLA-B27 allele which is also associated with different immunological and rheumatologic diseases like seronegative arthropathy.[3] Acute anterior uveitis is characterised by eye pain, photophobia, circumlimbal redness and anterior chamber cells and flare.[2] Proper physical and systemic examination with added ophthalmological investigations may be needed to rule out other associated systemic or ocular diseases.[2,4] This study was done with the aim to evaluate the profile of acute anterior uveitis cases presenting to tertiary centre located in Kathmandu, Nepal based on clinical and slit lamp examination findings. It is prime document to explore our experience in the institute and will help in further management perspective of the cases.

METHODS

This was a non-interventional retrospective cross-sectional descriptive study based on data record in Eye Department of our institute. The study period was of one year from December 2017 - November 2018. All cases of anterior uveitis presenting to us for further workup and management were enrolled in the study. Patients who were suspected to have uveitis at presentation but turned out to have different diagnosis on further evaluation were excluded. Age, sex, co-morbidities and profile of uveitis like slit lamp findings were recorded. Anterior chamber cells and flare are visible owing to the Tyndall effect of the bright beam. Cells and flare were observed on slit lamp examination in a field defined as a 1 x 1 mm high power beam at full intensity at a 45 - 60 degree angle in a dark room.

Prior to conducting the study ethical clearance was taken from local Institutional Review Committee. Detailed laboratory investigation was advised only for recurrent and bilateral cases. Laboratory investigations carried out were total and differential count, Erythrocyte Sedimentation Rate (ESR), Venereal Disease Research Laboratory (VDRL), Angiotensin Converting Enzyme (ACE), RA factor, X ray chest and TORCH infections. Further analysis was done after collection of the data.

RESULTS

A total of 52 cases of anterior uveitis were observed during the study period. Among the participants, the median age was 36 years with the youngest participant being 19 years and oldest of 79 years. No paediatric cases were seen in our study. There

Table 1. Clinical parameters observed

Variables		Number of patients	Percent
Sex	Male	34	65.4
	Female	18	34.6
Eye	Right	26	50.0
	Left	22	42.3
	Bilateral	4	7.7
	Unilateral	48	92.3
KPs	No	11	21.2
	Yes	41	78.8
SPK	No	44	84.6
	Yes	8	15.4
Flare	1+	25	48.1
	2+	8	15.4
	3+	2	3.8
AC cells	1+	18	34.6
	2+	25	48.1
	3+	9	17.3
Visual acuity (R)	Poor (< 6/60)	5	9.6
	Borderline (6/24 - 6/60)	11	21.2
	Good (6/6 - 6/18)	36	69.2
Visual acuity (L)	Poor (<6/60)	6	11.5
	Borderline (6/24 - 6/60)	12	23.1
	Good (6/6 - 6/18)	34	65.4

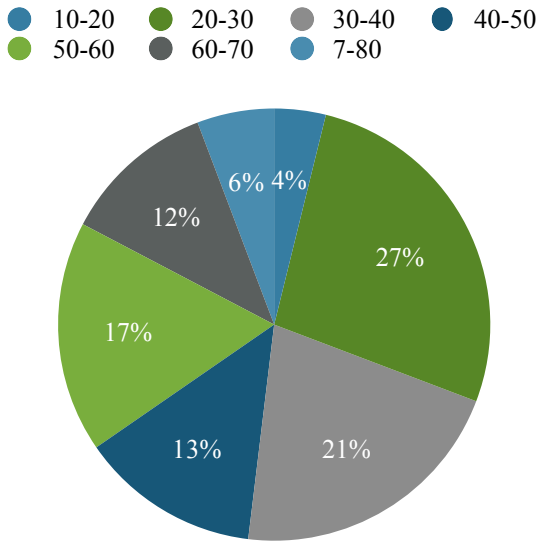

Figure 1. Pie-chart showing age distribution

was a total of 34 males and 18 females with sex ratio of 1.88. Unilateral involvement was seen in 48 cases (92.3%) which was more common than bilateral involvement which was seen in only four cases (7.7%). There were keratic precipitates in 41 patients (78.8%). Poor visual acuity was seen in six patients in left eye and five patients in right eye. Majority of the patients had good vision, 65.4% in right eye and 69.2% in left eye. (Table 1)

There were no paediatric patients in our study. Highest number of cases were seen in age group of 20 - 30 (27%) years followed by 30 - 40 (21%) years with the least number in age group of 10 - 20 (4%) years. (Figure 1.) Diminished vision was the commonest presenting complaint (94.2%) followed

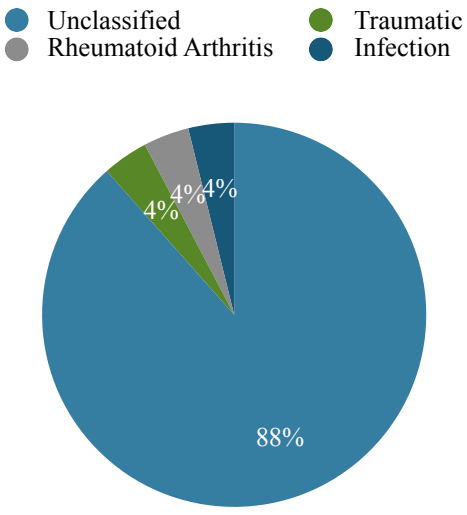

Figure 3. Pie-chart of etiology of uveitis

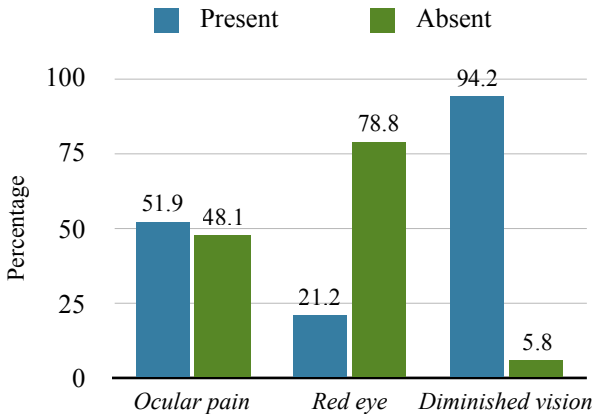

Figure 2. Bar diagram showing presenting complaints

by ocular pain (51.9%). Red eye (21.2%) was the least common symptom in our study. (Figure 2) The specific cause of anterior uveitis were traumatic, infective and rheumatoid arthritis each with 4.0% while in rest, the cause was not delineated. (Figure 3)

DISCUSSION

Our study provides clinical profile of uveitis in our institute, which is a tertiary level referral centre of our country. In our study, the median age of uveitis was 36 years with range of 19 to 79 years. It is consistent with similar studies conducted in other parts of the world.[5,6] Sex ratio of 1.8/1 was found in our study which contrasts with equal findings in both male and female in other study conducted in Nepal in Tilganga hospital[7] and study conducted in Africa.[5] Studies done in India showed increased number of cases in males.[8,9] Maximum number of cases were found in 3rd and 4th decade of life about 26.9% and 21.1% respectively, similar to the study conducted in Africa and Iran.[5,10]

Predominance of unilateral cases (92.3%) was seen in our studies similar to the studies conducted in Nepal and other parts of the world.[5,7] The most common presenting symptoms was decreased vision (94.2%) followed by ocular pain (51.9%) with red eye (21.2%). The reason behind decreased vision could be due to anterior chamber cells and flare and due to cornea involvement in kerato-uveitis cases. On the contrary, a study done in Japan showed red eye (51.8%) as the most common presenting symptom followed by reduced vision (28.6%) and ocular pain (17.9%).[11] The visual acuity was good (6/6 - 6/18) in right eye of 69.2 % patients and left eye of 65% of patients. As patients complained of decreased vision, this symptom was mentioned rather than blurring of vision. However,

most of the patients had good vision in spite of complaints of decreased vision. Majority of patients didn't complain of photophobia in our study. About 88% of cases of anterior uveitis were idiopathic (unclassified) followed by trauma, infective and rheumatoid arthritis each with 3.8%. The definitive etiological diagnosis of our study was about 11.4% which is less compared to Indian Subcontinent and a study in Srilanka with 35%.[12,13] Most studies done around the world and study in Nepal show infectious herpes virus to be the most common cause of anterior uveitis.[5,7,14] Two cases of herpes associated uveitis were seen in our study with associated keratitis. Our study is a retrospective study with limited number of sample size in a single centre, which is a major limitation of our study.

CONCLUSIONS

This study served to evaluate the clinical scenario of anterior uveitis in a tertiary level teaching institute of Nepal. Most of the cases occurred in males with the highest incidence seen in third and fourth decade. Majority had unilateral involvement. The most common complaints of the patient were decreased vision, eye pain and red eye. Further multi centric studies are required to extrapolate this data to the entire country.

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Conflict of Interest: None declared

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