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RESEARCH ARTICLE

STUDY OF PATTERN OF ANTERIOR UVEITIS IN RURAL SET UP

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Abstract

Introduction: Anterior uveitis includes iritis, iridocyclitis and anterior cyclitis. Aim of the study is to evaluate clinical profile of anterior uveitis in tertiary care centre in Western Maharashtra.

Methodology: An observational ,descriptive , cross sectional study was conducted at tertiary care hospital in rural set up. A total 35 eyes of 27 patients diagnosed with anterior uveitis were evaluated. All patients underwent complete ophthalmic evaluation and systemic examination.

Results: This study included 35 eyes of 27 patients. Anterior uveitis affected most commonly in people of age group of 5^{th} and 6^{th} decade. No gender predilection was seen. In majority of patients etiology was idiopathic (19 cases /70.37%) while of Rheumatoid Arthritis 2 cases were seen (7.40%). Majority of patients had non- granulomatous type of uveitis 91.42%. Unilateral presentation was seen in 70.37% of cases. Most common complication seen was complicated cataract seen in 7 eyes (20%).). Most of the eyes with anterior uveitis had cells of grade grade 2+(37.14 %) and flare 1+ (28.57%).

Conclusion: Anterior uveitis was most commonly observed in 5^{th} and 6^{th} decade of life. In most of the patients etiology was idiopathic. Acute anterior uveitis was most common common case presentation. Majority of patients of anterior uveitis had unilateral involvement and complicated cataract was the most common complication seen.

Introduction:-

The uvea is a highly vascular layer that lines the sclera and its principal function is to provide nutrition to the eye. The iris is responsible for metabolism of the anterior segment, by diffusion of metabolites through the aqueous. The ciliary body secretes aqueous which bathes the avascular structures of the anterior segment.[(1)]

Uveitis is inflammation of uveal tissue. However, clinically there is always some associated inflammation of adjacent structures such as retina,vitrous, sclera.

According to SUN classification, anterior uveitis includes iritis, iridocyclitis and anterior cyclitis .[2]

The total population prevalence of uveitis varies geographically and has been roughly estimated to be around 38 per 100,000 in France,200 per 100,000 in the US, and 730 per 100,000 in India.[(3)]

An Indian study has reported that anterior uveitis was the most common anatomical type (40%), followed by posterior uveitis (29%), intermediate uveitis (17%) and Panuveitis (14%).[(4)]

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The prognosis is generally good for those who receive prompt diagnosis and treatment, but serious complication including complicated cataract, secondary glaucoma, band keratopathy, macular edema, endophthalmitis, pan uveitis and permanent vision loss may result if left untreated. The type of uveitis, as well as its severity, duration, and responsiveness to treatment or any associated illnesses, all factors affect the outlook.[5]The precise cause of anterior uveitis is often obscure, and correct diagnosis is often challenging.

Methodology:-

This is hospital based Observational, Descriptive, Cross sectional study. The study was conducted at Ophthalmology department, Pravara Rural Hospital, Loni. All patients diagnosed with anterior uveitis from January 2021 to July 2022 were included in the study. Demographic data (age sex, address), ocular and systemic complaints, past history of ophthalmic and systemic disorders were recorded.

All patients underwent complete systemic and ophthalmic examination with the help of slit lamp bio microscopy, Snellen's chart was used for visual acuity testing and refraction to find out BCVA. Intraocular pressure was taken by Non Contact Tonometer / Applanation Tonometer.

Relevant laboratory investigations were noted like CBC, CRP, ESR, RA factor, LE cells, TORCH group of investigations, HIV, HbsAg, TB, COVID- 19 depending on symptomatology and feasibility. Fundoscopy was performed where the optical media allowed with +90D lens. Informed consent was obtained from all participants before study. Results were expressed in percentage.

Inclusion Criteria:

1. All patients attending ophthalmology department having symptoms and diagnosed cases of anterior uveitis.
2. Those who gave written informed consent to participate in study.
3. All clinical types of anterior uveitis acute, chronic, recurrent.

Exclusion Criteria

1.Patients of Intermediate uveitis
2.Patients of Posterior uveitis
3.Patients of panuveitis
4.Patients of Endophthalmitis
5.Immediate post cataract surgery uveitis.

Results:-

This study included 35 eyes of 27 patients who came to institute during the study period and diagnosed with anterior uveitis. Anterior uveitis affected most commonly in people of 50-69 years of age(Table 1). Out of 27patients of anterior uveitis 48.15% were males and 51.85% were females (Table 1). Majority of patient had unilateral involvement 70.37%. Bilateral anterior uveitis was seen in only 27.62% cases (Table 2). Acute anterior uveitis was seen in 65.71% of eyes. Only 20% cases had recurrent episodes of disease and 14.28% cases were of chronic course(Table 3).8 patients with acute anterior uveitis had good vision, BVCA upto 6/12, immature senile cataract(12 patients) being most common cause for diminished vision in patients of acute anterior uveitis followed by secondary glaucoma (3 patients). Majority of patients had non- granulomatous type of uveitis 91.42% (Table 4). Most of the eyes with anterior uveitis had cells of grade 2+(37.14 %) and flare 1+ (28.57%)(Table 5).Majority of eyes had fresh fine Kp'(26 eyes)(Table 6). In majority of patients etiology was idiopathic- 70.36% while cases of Rheumatoid Arthritis-7.40%, JIA-3.70%, Ankylosing spondylitis-3.70%, Tuberculosis -3.70%, Trauma-3.70%, Phacolytic uveitis-3.70%, Herpetic Uveitis-3.70%(Table 7). Out of 35 eyes of 27 patients complications due to anterior uveitis were seen in 13 eyes (37.14%) out of which complicated cataract was seen in 20% eyes while secondary glaucoma was seen in 8.50% and band keratopathy was seen in 8.50%(Table 8).

Age Group (in years)	No of Patients Male	No of Patients Female	Total Patients (n=27)	Percentage
0-9	0	0	0	0
10-19	1	1	2	7.40%
20-29	0	0	0	0
30-39	3	1	4	14.81%
40-49	1	0	1	3.70%
50-59	4	4	8	29.62%
60-69	4	5	9	33.33%
70-79	0	3	3	11.11%
Total	13 (48.15%)	14 (51.85%)	27	

Table 1:- Age and gender distribution of anterior uveitis.

Laterality	No . Of patients (n=27)	Percentage
Unilateral	19	70.37%
Bilateral	8	27.62%

Table 2:- Laterality of anterior uveitis.

Case Presentation	Vision					No . Of eyes (n=35)	Percentage
	6/6-6/12	6/18-6/60	5/60-3/60	2/60-1/60	HMCF-PL+PR accurate		
Acute	8	7	5	2	1	23	65.71%
Recurrent	-	3	1	1	2	7	20%
Chronic	-	-	1	2	2	5	14.28%

Table 3:- Clinical Presentation of anterior uveitis.

Pathological Pattern	No . Of eyes (n=35)	Percentage
Non Granulomatous	32	91.42%
Granulomatous	3	8.57%

Table 4:- Pathological Pattern.

Cells Grade	No . Of Eyes (n=35)	Percentage	Flare Grade	No . Of Eyes (n=35)	Percentage
0	2	5.71%	0	7	20.0%
0.5+	3	8.57%	1+	10	28.57%
1+	9	25.71%	2+	9	25.71%
2+	13	37.14%	3+	5	14.28%
3+	5	14.28%	4+	4	11.42%
4+	3	8.57%			

Table 5:- cells and flare.

Type of Kp's	Fresh	Old	No . Of eyes (n=35)	Percentage
Fine	26	6	32	91.42%
Mutton Fat	1	2	3	8.57%

Table 6:- Morphological appearance of Kp's.

Etiology of Anterior uveitis	No . Of patients (n=27)	Percentage
Idiopathic	19	70.37%
Trauma	1	3.70%
JIA	1	3.70%
Ankylosing Spondylitis	1	3.70%
Rheumatoid Arthritis	2	7.40%
TB	1	3.70%
Herpetic Anterior Uveitis	1	3.70%
Phacolytic Uveitis	1	3.70%

Table 7:- Etiology of Anterior Uveitis.

Complication of Anterior Uveitis	No . Of Eyes (n=35)	Percentage
Complicated Cataract	7	20%
Secondary Glaucoma	3	8.5%
Band Keratopathy	3	8.5%

Table 8:- Complication of Anterior Uveitis.

Discussion:-

1. Anterior uveitis was seen most frequently in the 5th decade of life (29.62%) and 6th decade of (33.33%) in this study. In the study conducted by Hussain and Mirza et al,it was observed that 40-50 years age group is more prone for anterior uveitis (27.53%).[6]
2. Out of 27 patients 13 were males and 14 were females no gender predilection was observed. Chandravanshi S.L reported higher frequency of anterior uveitis in males i.e 59.43% as compared to females (40.09%)[7]
3. Majority of patient had unilateral involvement 70.37%. Bilateral anterior uveitis is seen in only 27.62% cases in this study. Rathinam et al reported 85.3% unilateral presentation in their study.[8]
4. Acute anterior uveitis was seen in 65.71% of eyes. Only 20% cases had recurrent episodes of disease and 14.28% cases were of chronic course in this study. Sudha Madhvi et al reported about 75.86% of acute anterior uveitis and 17.82% had chronic, and 6% had recurrent uveitis.[9]
5. Specific etiology was identified in 29.62% of cases in our study out of which RA was seen in 7.40 % of all cases. Singh et al identified specific etiology of uveitis in 48.82% of cases[10]. Das et al reported collagen disease (29.4%) as most common cause of anterior uveitis.[11]
6. In our study non granulomatous uveitis was seen in 91.42% of patient of anterior uveitis while 8.57% patients had granulomatous uveitis. Sudha Madhavi et al reported non granulomatous uveitis in 90% of cases and 10% of patient had granulomatous uveitis.[12]
7. In this study, complications due to anterior uveitis were seen in 13 eyes (37.14%). Most common complication was complicated cataract formation seen in 20% of total eyes followed by secondary glaucoma and band keratopathy each in 8.5%. Rothova et al reported cataract in 19% cases, glaucoma 11% cases and phthisical eye in 2.4% cases. [13]

Conclusion:-

1. Anterior uveitis was most commonly observed in 5th and 6th decade of life and no gender predilection was seen.
2. Patients of acute anterior uveitis had mostly unilateral presentation.
3. Most common aeitiology was of idiopathic origin with non granulomatous type of presentation being most common.
4. Most common complication observed was complicated cataract.

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