PREVALENCE AND FACTORS ASSOCIATED WITH OCULAR MANIFESTATIONS OF RHEUMATOID ARTHRITIS AMONG PATIENTS ATTENDING MULAGO NATIONAL REFERRAL HOSPITAL

Authors

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INTRODUCTION

- Ocular manifestations are one of the most common (25-40%) manifestations in extra articular organ involvement in RA (Vignesh & Srinivasan, 2015; Ernie Bowling, 2013).

- Visual impairment secondary to these manifestations ranges 1.7%- 6% among RA patients (Kuol, 2019; Akintayo et al., 2019).

- Raw data obtained from medical outpatient rheumatology clinic at MNRH shows that RA is the most common condition (30%-40%) compared to other conditions.

- Currently, an increased magnitude (96.6%) of ocular manifestations has been reported in East Africa, Kenya (Kuol, 2019).

INTRODUCTION

- These manifestations are markers of severe systemic involvement as well as predictors of mortality among RA patients (Ausayakhon , Louthrenoo , & Aupapong 2002).

- Management of these manifestations put additional economic burden to the patients and health care system (McDonald, Patel, Keith, & Snedecor, 2016).

- However, No documented study done in Uganda to determine the magnitude of these manifestations.

- Therefore, this study was aimed to determine the prevalence and factors associated with ocular manifestations in RA at MNRH.

OBJECTIVES

- To determine prevalence of ocular manifestations of RA among patients attending rheumatology medical clinic at MNRH.
- To determine patterns of ocular manifestations of RA among patients attending rheumatology medical clinic at MNRH.
- To determine factors associated with ocular manifestations of RA among patients attending rheumatology medical clinic at MNRH.

METHODOLOGY

- **Study design:** Hospital based cross sectional study
- **Study period:** July 2021- September 2021

- **Study setting:** Mulago National Referral Hospital, medical rheumatology clinic
- **Study population:** All RA patients who were seen at the MNRH medical rheumatology clinic and met the inclusion criteria.

METHODOLOGY

- **Inclusion criteria:** All patients aged 18 years and above who were seen at MNRH rheumatology medical clinic from July 2021-September 2021 diagnosed with RA using 2010 ACR/EULAR criteria by a rheumatologist and consented to take part in the study.

- **Exclusion criteria:** All RA patients who were too ill to withstand the rigor of my interview and ocular assessment.

- **Sample size:**105 participants

STUDY PROCEDURE

- Details of diagnosis of RA, type and dosage of drugs being used were obtained from patient’s file.

- Detailed history, general and ophthalmological examination were done on all patients to look for presence of ocular manifestations.

RESULTS

Socio-demographic characteristics

- A total of 105 RA patients were enrolled into a study.
- The age of the participants ranged from 18-82 years with mean age of 45.5 (SD±15.8)
- Majority (92.4%, n =97) were female

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Figure 1. Prevalence of ocular manifestations of RA at MNRH, rheumatology medical clinic.

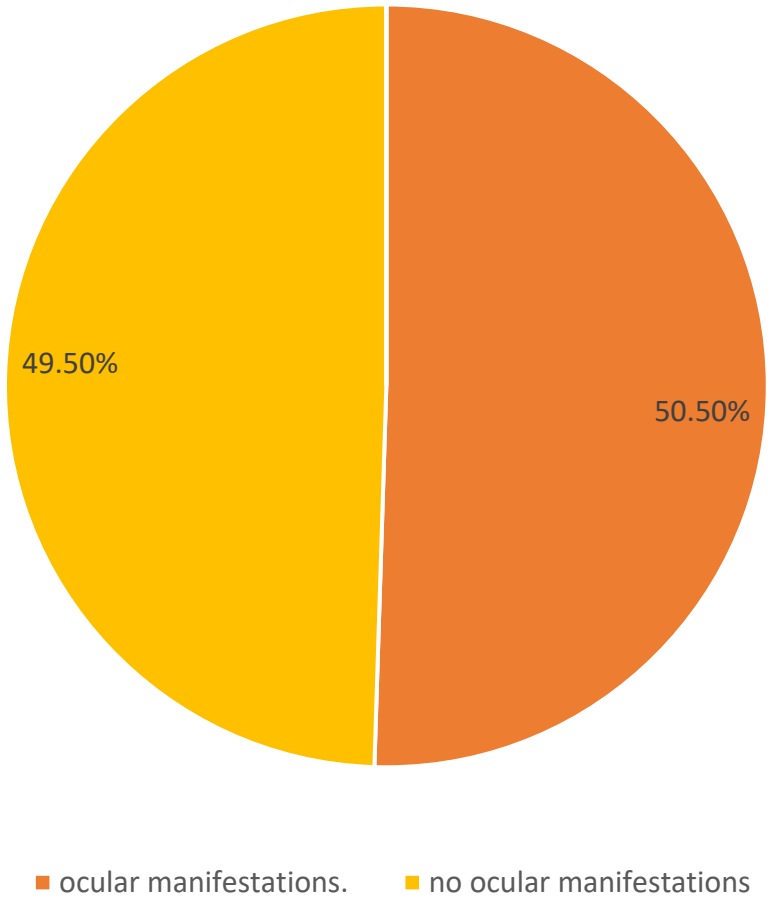

Table 1. Pattern of ocular manifestations among 53 RA patients with ocular manifestations at MNRH, rheumatology medical clinic.

Ocular manifestation	Frequency (n)	Percentage (%)
Dry eye syndrome	29	54.7
Cataract	7	13.2
Episcleritis	3	5.7
Raised IOP	2	3.8
Scleritis	1	1.9
Other ocular manifestations		
Allergic conjunctivitis	5	9.4
Penguecula	2	3.8
Pterygium	2	3.8
Conjunctival growth	1	1.9
Hypertension retinopathy	1	1.9

Table2. Multivariate analysis of factors associated with ocular manifestations in RA patients at MNRH, rheumatology medical clinic

Variable	aPR and 95% confidence interval	P value
Age (years)		
18-35	1	
36-55	1.56 (1.09-2.24)	**0.015**
> 55	1.46 (0.79-2.70)	0.226
History of chronic illness		
No	1	
Diabetes	1.73 (0.90-3.32)	0.098
Hypertension	0.99 (0.63-1.55)	0.972
Both diabetes and hypertension	1.87 (1.13-3.10)	**0.014**
Duration of RA		
< 5 years	1	
≥ 5 years	1.81 (1.27-2.58)	**0.001**
Duration of HCQ use		
Non users	1	
≤ 5 years	1.22 (0.41-3.64)	0.720
> 5 years	1.77 (1.02-3.05)	**0.041**
Dosage of steroid (daily dose)		
Non users`	1	
≤ 10mg`	0.54 (0.26-1.16)	0.115
> 10mg	1.49 (1.03-2.15)	**0.034**

DISCUSSION 1

- The prevalence of ocular manifestations was 50.5% (n=51) which is similar (46%) to that was obtained in Nigeria. However, higher prevalence (78.12%) than ours was reported in Nepal.

- Dry eye syndrome was the most common (54.7%, n=29). This finding coincides with a study done in Egypt (54.7%) but differ from study in Kenya (93.2%).

- Cataract was the second most common (13.2%, n=7) . Similar results were found in Greece (14.94%) but lower prevalence (8.7%) than ours was obtained in Iraq .

DISCUSSION 2

- Patients aged 36-55 years (aPR 1.56, p value = 0.015) was significantly associated with ocular manifestations. This is in agreement with the study in India (43 years, p< 0.01).

- RA for more than 5 years was significantly associated with ocular manifestations (aPR 1.81, p value=.0.001.Similar findings obtained in Egypt (odds ratio=7.13, p value <0.001).

- There was a statistically significant association between ocular manifestations and use of hydroxychloroquine for more than 5 years in RA patients (aPR 1.77, p value=0.041). In Nigeria there was no significant association.

CONCLUSION

- The prevalence of ocular manifestations among the RA patients was high, 50.5%. Every 1 in 2 RA patients had ocular manifestation.

- The most common ocular manifestation was dry eye syndrome at 54.7%

- RA patients for more than 5 years, patients aged 36-55years, hydroxychloroquine use for more than 5 years, > 10mg of steroid and those who had history of both diabetes and hypertension were more prone to ocular manifestations

THANK YOU