

PREVALENCE PATTERNS AND ASSOCIATED FACTORS OF RETINAL DISEASE AS DETECTED ON THE CIRRHUS FUNDUS CAMERA AT MULAGO NATIONAL REFERRAL HOSPITAL

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Background

- Retinal disease (RD):
 - among the top five causes of visual impairment and Blindness worldwide
 - Cause irreversible loss of vision & major contributor of visual impairment and blindness (13-37%) after cataracts.
- Several studies done in sub-Saharan Africa report high occurrence of retinal disease(Nkanga et al,2020 and Teshome et al, 2004)

Background

- RD has changed its pattern with evidence in demographic shift (Kabedi et al,2020 and Nazimul et al.,2008)
- Aim of this study was to determine the prevalence, patterns, and associated factors of retinal diseases among patients at MNRH ophthalmology outpatients' clinic.
 - It is important to assess the burden of retinal disease in order to plan for their prevention and treatment

Methodology

- **Study design:** A cross-sectional study, from January 2017 to April 2020
- **Inclusion & Exclusion criteria:**
 - Records of patients from January 2017 to April 2020
 - All records that had clear and visible fundus images
 - Records with incomplete sociodemographic & clinical information
- **Sample size:** 573

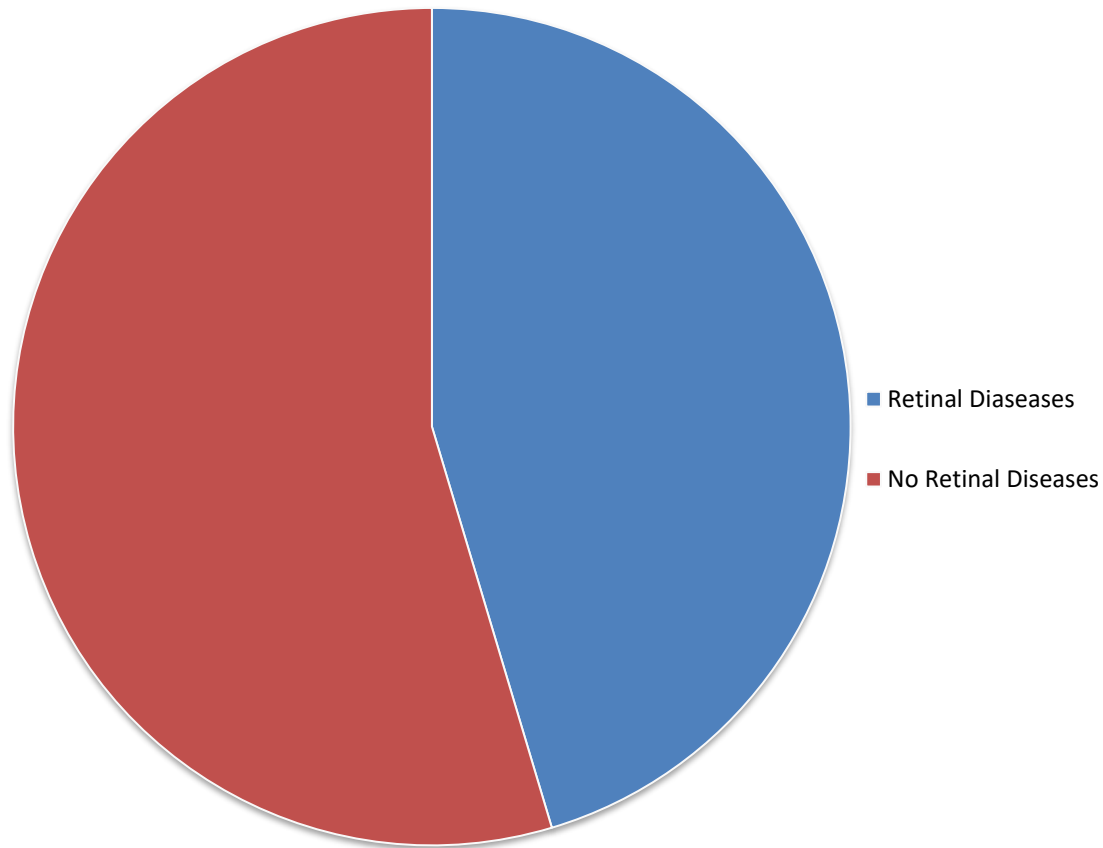
Results

- 573 patient files retrieved with their corresponding fundus images.
- Age range: 8 to 99 years
- Median age 50.

Social demographic characteristics of participants at MNRH during the study period

Characteristic	Frequency	Percentage
Age in complete years		
1-15 (children)	25	4.4
16-35 (young adults)	130	22.7
36-50 (middle age)	145	25.3
51+ (elderly)	273	47.6
Gender		
Female	323	56.4
Male	250	43.6
Address		
Outside Kampala	172	30.0
Within Kampala	401	70.0
Ethnicity		
Bantu	476	83.1
Nilo-Hamites	41	7.2
Nilotic	45	7.9
Other	11	1.9

Prevalence of retinal disease as detected on the cirrhys fundus camera at Mulago (n= 573)



260/573 (45.4%) patients with RD

Result

- This prevalence is high compared to studies done in neighboring Tanzania(22.8%) and Nigeria(13%) (Jacobsen et al,2020 and Ajayi et al, 2016)
- High among 51years above(59.2%), comparable to Nigerian study(68.5%)(Ajayi et al.,2016)

Patterns of RDs as detected using the cirrus fundus camera

Characteristic	Frequency(n=260)	Percentage
Diabetic Retinopathy	72	27.7
PDR (n=22,30.6%)		
NPDR (n=55,69.4%)		
Age Related Macular Degeneration	49	18.9
Hypertensive Retinopathy	25	9.6
Macular hole	15	5.8
Infectious Retinopathy	14	5.4
CMV (n=3, 21.4%)		
Toxoplasmosis (n=6, 42.9%)		
HIV (n=5, 35.7%)		
Retinal detachment	12	4.6
Branch Retinal vein occlusion	10	3.9
Macular scars	9	3.5
Epiretinal membrane	9	3.5
Chorioretinitis	8	3.1
Cystoid Macular edema	6	2.3
Central Retinal vein occlusion	5	1.9
Macular dystrophy	3	1.2
Retinitis Pigmentosa	2	0.8
Others	49	18.9
Retinal Degeneration (n=24, 49.0%)		
Maculopathy (n=21, 42.9%)		
Retinal Tumors (n=4, 8.2%)		

Result

- DR and AMD were the commonest forms of retinal disease in this study.
- Similar to those found in 2 studies in Nigeria and Nepal(DR at 12.6% and 24.9%) followed by HR at 13.3% to 18.9%)(Eze et al.,2010 and Thepa et al.,2013)

Associated factors

- Diabetes mellitus and hypertension were the factors associated with retinal disease
- Consistent with other studies(Eze et al.,2010;Bhim B Rai et al., 2019)

Conclusion

- The prevalence of RD was high, 9 in every 20 patients (45.4) had some form of RD.
- The major RD found among the patients were:
 - DR, AMD, Hypertensive retinopathy, Macular hole and Infectious retinopathy
- Hypertension and diabetes mellitus were the risk factors of retinal disease in this study.

Recommendation

- Routine screening for retinal disease should be considered especially among the older persons (>50 years) for better management.
- Ophthalmology, diabetic and hypertensive clinics should have high index of suspicion for retinal disease among patients aged 50 and above who present with visual disturbance

Thank you,

Awadifo,Iyete

Example DR



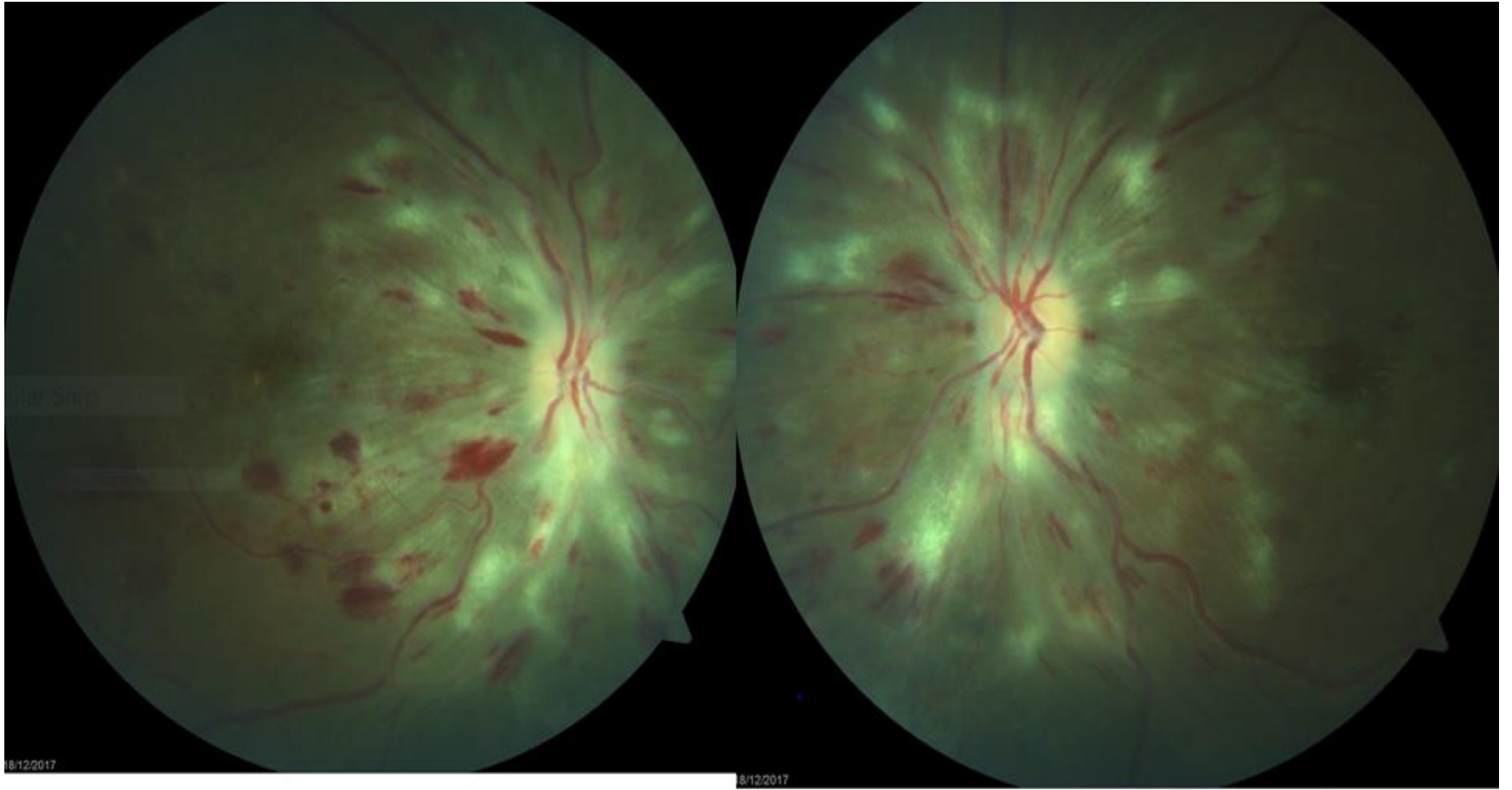
Example of PDR



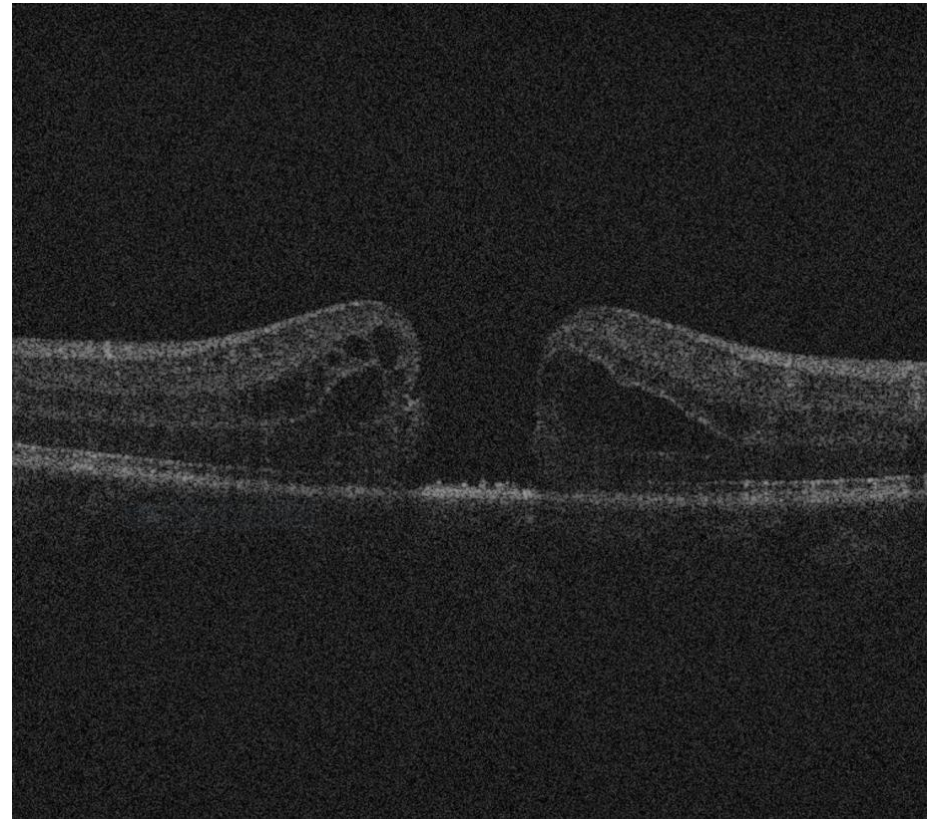
Example of HR



HR



Example of MH



Example AMD



Example of RP



Example of CMV

