The Prevalence of Age-Related Macular Degeneration in Malta

Preliminary Data from The Malta Eye Study

David Agius, Julian Mamo, Michaela Zammit, Maria Christina Nappa, Francis Carbonaro

L-Università ta' Malta

The Malta Eye Study

The Malta Eye Study (TMES)

- Cross- sectional ophthalmic prevalence study
- Adult population of Malta aged 50-80

Aim

To provide the prevalence of the common visually-impairing eye diseases, including Age-Related Macular Degeneration (ARMD), cataract, glaucoma and diabetic retinopathy. This presentation focuses on preliminary ARMD results.

Method

Recruitment of a randomised sample of 2000 subjects (Malta Electoral Register) aged 50-80

Relevant assessments for the results presented here include:

1. Visual examination
   - LogMAR chart calibrated at 4 m
2. Ophthalmic exam and investigations
   - Slit lamp exam
   - Visionix
   - OCT scan

The Age-Related Eye Disease Study (AREDS) [1] ARMD classification system was used to stage ARMD based on clinical fundoscopic appearance, photography and OCT

Preliminary Results

2242 invitations , 708 participants Sept 2021-Sept 2022

48.2% females, 51.8% males

The ARMD prevalence rates by age and stage of ARMD are shown in **Figure 1**

The prevalence rates of Visual Impairment (VI) by ARMD and proportions of VI caused by ARMD are shown in **Table 1**

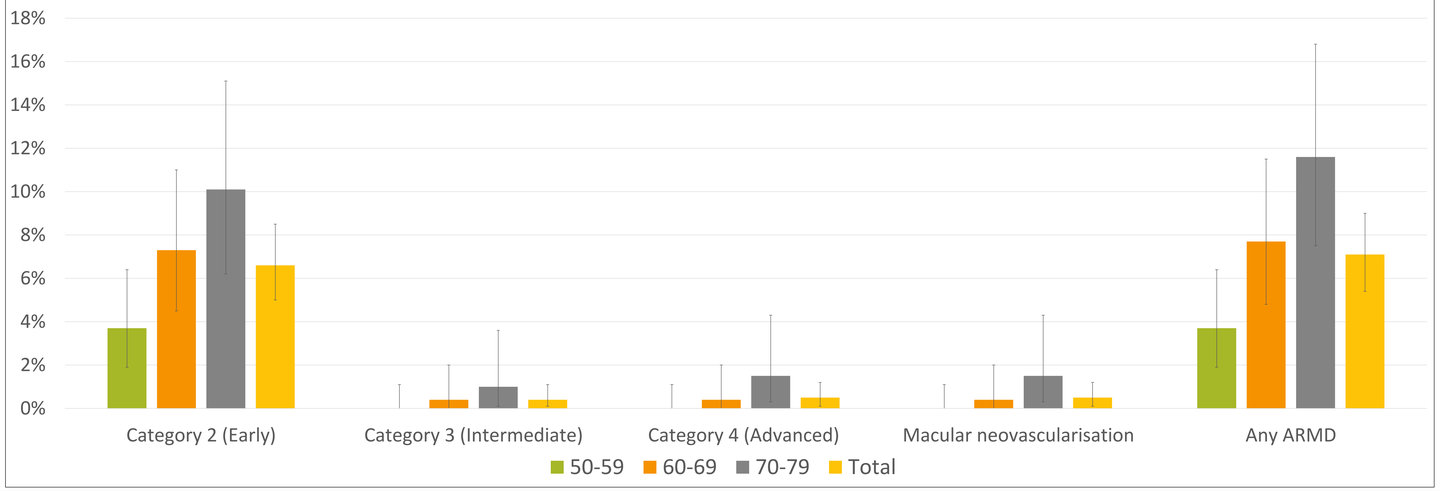
Table1 – Age-adjusted prevalence of ARMD Visual Imapirment (VI) and the proprotion of VI caused by ARMD in the population of Malta aged 50-80

ARMD: Age-Related Macular Degeneration, VI: Visual Impairment, MSVI: Moderate Severe Visual Impairment

Figures presented with 95% Confidence Intervals in brackets

Grade of VI	Prevalence of ARMD related VI	Proportion of total VI caused by ARMD
VI in at least 1 eye	0.6% (0.2%, 1.4%)	2.8% (0.9%,6.4%)
Bilateral VI	0.2% (0.0%, 0.9%)	4.5% (0.6%,15.5%)
Unilateral VI	0.4% (0.1%, 1.1%)	2.2% (0.5%, 6.2%)

Figure 1 - Age-adjusted prevalence of ARMD in Malta by AREDS ARMD stage and by age (with 95% confidence interval bars)



Discussion Points

1. As shown in **Table 2**, prevalence rates of early and late ARMD stages in Malta were similar to global figures[2] in the same age groups of 50-80 years (p=0.14, p=0.40 respectively).

2. In comparison to data from recent European estimates[3], in people aged 60 years and over, early/intermediate and late ARMD rates in the same age group were significantly lower in Malta (one sample binomial test p values: <0.01, 0.01 respectively). Possible protective features may include the Mediterranean diet[4] and genetics.

3. Wide confidence intervals were obtained for VI indices related to ARMD. This is because small numbers of people with visual impairment were identified in the sample that has been used for preliminary analysis.

Table 2 – Comparison of age-adjusted ARMD prevalence in Malta with global and European figures

95% Confidence intervals in brackets

Early ARMD = Categories 3/4 AREDS classification, Late ARMD = Category 4 AREDS classification

Age	Study	Early ARMD	p value (Early ARMD)	Late ARMD	p value (Late ARMD)
50-80	TMES	6.9% (5.3%, 8.9%)	0.14	0.5% (0.1%, 1.2%)	0.4
	World[2]	8.0% (4.0%, 15.5%)		0.37% (0.2%, 0.8%)	
60-80	TMES	9.0% (6.6%, 11.8%)	<0.01	0.8% (0.2%, 2.0%)	0.01
	Europe[3]	25.3% (18.0%, 34.4%)		2.4% (1.8%, 3.3%)	

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Financial Disclosures

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Contact

Dr David Agius
University of Malta
Ophthalmology Outpatients, Mater Dei Hospital
Msida, Malta
david.agius.08@um.edu.mt