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Global vision loss due to age-related macular degeneration

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Footnotes

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Abstract

Purpose : To contribute to the WHO initiative, VISION 2020: The Right to Sight, an assessment of the causes of global vision impairment in 2020 and temporal change is needed. We aimed to extensively update estimates of global vision loss burden due to age-related macular degeneration (AMD), presenting estimates for 2020, temporal change since this initiative commenced, and distribution by sex and region.

Methods : We did a systematic review and meta-analysis of population-based surveys of eye disease from January 1980 to October 2018. The data from these surveys are collated by the Vision Loss Expert Group in the Global Vision Database. We fitted hierarchical models to estimate prevalence (with 95% uncertainty intervals [UIs]) of moderate and severe vision impairment (MSVI; presenting visual acuity from <6/18 to 3/60) and blindness (<3/60 or less than 10° visual field around central fixation) caused by AMD, stratified by age, region, and year. The analysis focused on adults aged 50 years and older.

Results : In 2020, worldwide, an estimated 1.84 million (1.34 to 2.42) people aged 50+ years were blind due to AMD, and a further 6.22 million (5.03-7.57) moderately or severely vision impaired (MSVI). There had been a 42.1% (39.4-43.3) increase in cases of blindness and a 93.7% (92.4-94.2) increase in cases of MSVI since 2000. Over the same period, the age-standardized prevalence of AMD blindness decreased by 22.6% (21.2 to 24.7), and MSVI increased by 8.6% (7.7-9.4). In terms of the age-standardized prevalence of AMD blindness, the ratio of females to males affected was 1.45:1.00 in 2020 and 1.44:1.00 in 2000. Between 2000 and 2020, the age-standardized prevalence of AMD blindness in males and females decreased to a similar extent (22.2% versus 21.7%). Among GBD super-regions, North Africa and Middle East had the highest crude AMD blindness rates in 2020 in adults aged 50+ (0.18%; 0.13-0.25), followed by the High-Income super-region (0.14%, 0.11-0.18). The most profound reduction (>-30%) in age-standardized AMD blindness rates between 2000 and 2020 was in Southeast Asia, East Asia, and Oceania (-34.1%, -32.8 to -36.1).

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Conclusions : Despite a decrease in the age-adjusted prevalence of AMD-related blindness, the increase in the age-adjusted prevalence of AMD-related MSVI and the increase and ageing of the population led to a marked increase in the number of individuals affected by AMD-related blindness and MSVI.

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