

Preventing the progression of AGE-RELATED MACULAR DEGENERATION



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Age-related macular degeneration (AMD) is one of the leading causes of blindness in the elderly populations around the world.

The stages of AMD are categorised as (i) early, when visual symptoms are inconspicuous; (ii) intermediate, where vision deterioration is beginning; and (iii) late, in which severe loss of vision is usual. Late stage AMD, also known as wet AMD, is a cause for poor visual function, anxiety, depression, falls, and impaired activities of daily living.

➔ A large randomised controlled clinical trial conducted by the Age Related Eye Disease Study (AREDS) Research Group showed that provision of high dose anti-oxidant vitamins and zinc (hereafter known as AREDS formulation) to certain AMD patients (categories 3 or 4) was clinically effective in preventing progression to wet

AMD. A recent report on the long-term follow up of the patients in the AREDS clinical trial also showed a decreased risk of developing wet AMD following long-term use of AREDS formulation. Further, studies have also shown that the AREDS formulation is cost effective in preventing the progression to late-stage AMD. However, both studies were conducted in Caucasian populations.

➔ Singapore has a rapidly ageing population with over 9 per cent of the resident population being aged 65 years or above in 2012. By 2030, it is estimated that one in five resident Singaporeans will be aged 65 years or above. As a result of this rapid ageing, the burden of ocular morbidity and visual disability due to age-related eye disorders in Singapore is set to increase.

➔ As a young researcher at the Health Services & Outcomes Research (HSOR) unit, the first study I was involved in aimed to determine if providing anti-oxidant vitamins and zinc in high doses to categories 3 or 4 AMD patients aged 40-79 years from Singapore is cost effective in preventing progression to wet AMD. Our study showed that prescribing high dose anti-oxidant vitamins and zinc to AMD patients was extremely cost effective in preventing progression to wet AMD especially if the associated costs for the approved treatment for wet AMD (ranibizumab and aflibercept – anti VEGF drugs) were taken into consideration. These findings have implications for intermediate AMD screening, treatment and healthcare planning in Singapore.

➔ I joined the unit as a Research Analyst after completing my doctoral studies at the School of Public Health, National University of Singapore (NUS). As a student at NUS, I had the good fortune of working with two fantastic researchers and mentors, Dr Mikael Hartman and Dr Helena Verkooijen. Epidemiology, my core subject at NUS, was new to me and I spent a lot of my initial time at NUS understanding concepts and learning new statistical terminology and analysis software.

➔ Moving from clinical epidemiology-based work at NUS to health services research at NHG was challenging, with a steep learning curve. I am thankful to my seniors, colleagues and collaborators for their continued guidance. I still have a long way to go before I am well-versed with the various concepts of health economics and health services research, and this study has helped me understand the nuances and intricacies involved in such research.

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