



A Clinical Analysis of Age-Related Macular Degeneration in Qinghai Plateau

Jason S Ng*

The article published in the second issue this year, "A clinical analysis of age-related macular degeneration in Qinghai Plateau" by Zhu et al. presented results concerning age-related macular degeneration (AMD) from a population that lives in a unique environment. Interestingly, as the authors point out the typical prevalence of the 'wet' form of AMD is on the order of 10-15% (with the 'dry' form of the disease 85-90%). In the population the authors report on, the incidence of the wet form of the disease was nearly 44% (with the dry form 56%). This was certainly an interesting finding and a valuable contribution to the literature and the authors attribute this to a number of factors, chief among those being the chronic hypoxic environment of the population with the study population on average living 3000 meters above sea level. They also identified age, gender, smoking, and cardiovascular status as risk factors; which are also identified risk factors that have been found in other populations studied [1,2].

The authors also reported numerous descriptive statistics. Among 185 patients, they included 288 eyes in the study that presumably met their inclusion criteria. From these, 45 are reported to have dry AMD, 28 wet AMD, and 38 mixed dry and wet AMD. Given this data though it is not clear how to derive that 44% had the wet form of the disease and 56% had the dry form of the disease. It would be helpful if the authors had reported the number of eyes with each form of the disease as well. It is also well known that AMD's clinical presentation is typically bilateral, though with a degree of asymmetry. Generally, to avoid the statistical effects of correlated data it is best to analyze one randomly chosen eye per patient case (assuming both eyes qualify for inclusion in the study) or the correlation must be taken into account by using appropriate statistics (e.g. stratification or sub-analyses by monocular and binocular cases) [3,4].

It was also reported that 'blind' and 'low vision' patients constituted 9% and 28% of their population diagnosed with AMD. However, the authors do not specify the criteria used for 'blind' and 'low vision'. As the journal is international in scope and not every part of the world may have exactly matching definitions of 'blind' and 'low vision', it would have been helpful if the authors included their criteria for these terms.

Reference documents from the World Health Organization may be the most appropriate for an internationally accepted definition [5]. In low vision practice, it is often the case by ICD-10 standards that a single diagnosis is made based on the visual acuity in the worst eye and the visual in the best eye. Eyes are expected to be correlated, so it may have been helpful to report this data as the worst eye per case in addition to the reported data.

Related to the absence of the definitions of 'blind' and 'low vision' in the article, visual acuity data also appears to be lacking as well as any methodology on visual acuity. The international research standard is to report visual acuity in terms of logMAR using a printed or electronic form of the ETDRS chart [6-8]. However visual acuity is not reported in any specific form in the article. As important as the articles findings are, the reader is lacking clinical context of status of AMD in this unique population without specific visual acuity data. This is critical data to report and would also include visual acuity of the best eye, even if that eye was not enrolled in the study.

These additional data and analyses would allow the scientific and clinical community to better understand the status of AMD in this population because without it, interpreting the results and conclusions difficult.

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*Corresponding author: Jason S Ng, OD, PhD, FAAO, Associate Professor, Southern California College of Optometry at Marshall B. Ketchum University, Fullerton, CA, USA, Tel: 714 992 7880; E-mail: jng@scco.edu;jng@ketchum.edu

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Author Affiliation

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Southern California College of Optometry at Marshall B. Ketchum University, Fullerton, CA, USA