

June 29, 2014



Dear Editor,

Please find enclosed the edited manuscript in Word format (file name: 10747-review.doc).

Title: Choroidal Neovascularization Secondary to Pathologic Myopia

Author: Kelvin Teo, Chui Ming Gemmy Cheung

Name of Journal: *World Journal of Ophthalmology*

ESPS Manuscript NO: 10747

The manuscript has been improved according to the suggestions of reviewers:

Revision has been made according to the suggestions of the reviewer

(1) *Please report the percentage of patients with presence of CNV in both eyes (15%):*

In pathological myopes, however, the incidence and prevalence have been reported to be as high as 10% and 0.5% respectively^[29] and bilateral in 15%.

(2) *Please provide a better definition of the role of fluorescein angiography and OCT examination in the monitoring of the CNV activity:*

Monitoring of disease activity

FA remains the standard for diagnosis and disease activity monitoring of mCNV ^[89, 90]. With the advent of anti VEGF treatment, there is growing importance in the use of OCT as a simple non-invasive alternative of disease monitoring. There are however, shortfalls of the use of OCT in disease monitoring of mCNV. In myopic eyes, the retina and choroids are thin and mCNV typically have minimal leakage with minimal intra/sub retinal fluid, hence OCT findings may not be as informative as compared to its use in AMD CNV. Introni suggest that there is no evidence for central retinal thickness or sub/intra retinal fluid in mCNV. Instead, they suggest the use of outer retinal characteristics on SD OCT; identification of a hyper-reflective lesion with fuzzy borders and a more highly reflective core above the RPE, and 'absent or altered' IS/OS junction as signs of activity and found a regressions of these findings and RPE thickening after treatment.^[91]

(3) *Complete with a concise summary on CNV with extrafoveal and Juxtafoveal location:*

The natural progression of mCNV shows an early stabilization of vision followed by gradual decrease in VA over time due to the development of chorioretinal atrophy. The final visual outcome relates closely with the distance of CNV from the fovea and inversely with the size of CNV. Subfoveal location of CNV is associated with worse visual outcome when compared with juxtafoveal and extrafoveal location, however, there is a high likelihood of conversion of these CNVs to subfoveal type or extension of the CNV within the fovea.

(4) *Pathologic myopia and high myopia are two different terms. Pathologic myopia is determined by pathologi*

cal changes in the fundus and high myopia is determined only by the degree of refractive errors. Therefore, in the review of the epidemiology of pathologic myopia, these two terms should be used very carefully and separately. For example, the authors mentioned: "There is significant variation in the prevalence of pathologic myopia between populations, and East Asian countries have reported significantly higher prevalence of high myopia compared to the rest of the world.(13) ". This sentences should be changed into: "There is significant variation in the prevalence of high myopia between populations, and(13) Furthermore, Ref. 13 is a review article, the authors estimated the prevalence of refractive errors among adults in the United States, Western Europe and Australia based on six studies. None of these six studies dealing with the prevalence of myopia in East Asia and they only mentioned that: "the too few persons studied to make population prevalence estimates in Asia." Therefore, this paper could not be cited as evidence that "East Asian countries have reported significantly higher prevalence of high myopia compared to the rest of the world" Lin et al. reported that in Taiwan, the prevalence of myopia in 15 years-old students increased from 37% in 1983 to 61% in 2000 and the prevalence of high myopia (<-6D) in 18 years-old students increased from 11% in 1983 to 21% in 2000 (Ann Acad Med Singapore 33:27, 2004). This report could be added as an evidence to document that the prevalence of myopia and high myopia was higher in East Asia and increased rapidly in recent years. The authors cited the prevalence of high myopia in the Blue Mountains Eye Study, this is unnecessary, because this result was included in the six reports analyzed in Ref. 13. Therefore, it is better to conclude that the prevalence of high myopia (<-5D) is 4.5% in the United States, western Europe and Australia.(13):

There is significant variation in the prevalence of high myopia between populations, and East Asian countries have reported significantly higher prevalence of high myopia compared to the rest of the world.^[13] The overall prevalence of myopia also appears to be increasing, thus reflecting a complex interplay of genetic, environmental and epigenetic factors underlying the pathogenesis of this condition.^[2] A predominantly Caucasian population in the United States, western Europe and Australia, reported prevalence of myopia (<-5D) is 4.5%.^[14] as compared to the Hisayama study in Japan which reported a higher prevalence of 5.7%.

(5) In the treatment of myopic CNV, it is suggested to move "surgery" from the section "Thermal laser photocoagulation and surgery" and set-up as a separate section, because the two different surgical procedures (excision of subretinal myopic CNV and macular translocation) were unrelated with laser photocoagulation:
New section on surgery created

(6) In the safety of anti-VEGF therapy, Carneiro et al. reported that VEGF plasma levels decreased 42% in patients treated by intraocular injection of bevacizumab, but not in ranibizumab-treated patients (Acta Ophthalmol 90:e25-30, 2012). This could be added to the section of "Safety of anti-VEGF therapy".

Carneiro et al. reported that VEGF plasma levels decreased 42% in patients treated by intraocular injection of bevacizumab, but not in ranibizumab-treated patients, potentially highlighting the safety profile between the two drugs.^[85]

3 References and typesetting were corrected

Thank you again for publishing our manuscript in the *World Journal of Ophthalmology*.

Sincerely yours,



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