I was interested to read the paper by F.J. Gomez-Ulla de Irazazabal et al. The authors made some erroneous and misleading statements on the subject which require to be rectified.

The two retinal venous trunks, draining the upper and lower halves of the retina, usually join on the optic disc to form the central retinal vein. However, in about 20% of the population, as a congenital anomaly, the two trunks enter the optic disc separately and join each other within the optic nerve at a variable distance from the optic disc [2–4]. The main retinal vein draining the upper or lower half of the retina may be (i) occluded at the arterio-venous crossing on the retina near the optic disc or on the surface of the optic disc (as was seen in 2 of the 9 cases of the authors), or (ii) if the eye has the anomalous pattern mentioned above, the site of occlusion in the involved trunk may be within the optic nerve, similar to that occurring in central retinal vein occlusion (seen in the remaining 7 cases of the authors). In our prospective studies on retinal vein occlusion, we discovered that occlusion of one of the two venous trunks (draining one or the other half of the retina) within the optic nerve represented pathogenetically and clinically an entirely new entity which was erroneously diagnosed till then as a variant of ordinary major branch retinal vein occlusion [5]. We called this new entity ‘Hemi-central Retinal Vein Occlusion’ [5]. Our studies clearly showed that the hemi-central retinal vein occlusion clinically and pathogenetically is closely related to central retinal vein occlusion and unrelated to major branch retinal vein occlusion, because, unlike major branch retinal vein occlusion, it showed the following features:

Site of occlusion: in the optic nerve.
Location of venous collaterals: on the optic disc.
Raised intraocular pressure: seen in 1/3 of the patients.
Ischemic and non-ischemic types: The retinopathy in this condition, as in central retinal vein occlusion, is either of ischemic (in about 1/3) or non-ischemic (in about 2/3) type [5, 6]. In contrast to that, in major branch retinal vein occlusion, because of its totally different pathogenetic and hemodynamic mechanisms, the retinopathy in the vast majority is of the ischemic type.

de Irazazabal et al. [1] made the following conclusion, based on a retrospective review of case records of only 9 cases:

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That there is no ‘statistically significant’ difference in the incidence of glaucoma between the hemi-central retinal vein occlusion and major retinal vein occlusion. Anyone having even elementary knowledge of statistics knows that 9 cases represent too small a sample to give ‘statistically significant’ data!
‘It is merely academic interest to distinguish between hemi-central and major vein occlusions.’ They further stressed that ‘Under these circumstances, the point at which the central vein bifurcates is irrelevant, and all hemispheric retinal vein occlusions should be referred to as hemispheric retinal branch vein occlusions.’

In support of their conclusions the authors cite the paper Sanborn and Magargal [7]. The study by the latter authors was based on a retrospective review of case records, had only 10 cases with hemi-central retinal vein occlusion in it, and had multiple serious problems (a few of which were pointed out by Dr. Froncie A. Gutman in the discussion of the paper [7]); to discuss all those is outside the scope of these brief comments. The validity of their findings and statements has to be assessed in the light of those serious limitations. It is well known that retrospective clinical studies, though very easy to conduct, have serious drawbacks, inadequate information and personal biases, and not infrequently yield misleading information.

In our Ocular Vascular Clinic at Iowa City we have been conducting a prospective study on the various types of retinal vein occlusion since 1975. We have collected data so far on about 550 eyes with central retinal vein occlusion, about 150 eyes with hemi-central retinal vein occlusion and about 250 eyes with major branch retinal vein occlusion. These studies clearly show that the assertions by de Irazazabal et al. [1] and Sanborn and Magargal [7], based on their retrospective studies, with inadequate samples and other serious problems, are erroneous, and highly misleading. For example, previous studies in the literature and our large prospective study clearly show that in major branch vein occlusion the incidence of glaucoma/ocular hypertension is no higher than in the general population. To advocate that distinction between hemi-central retinal vein occlusion and major branch retinal vein occlusion is irrelevant, reflects a profound lack of basic knowledge on the subject on the part of the authors. For example, about 2/3 of patients with hemi-central retinal vein occlusion belong to the non-ischemic category, which means those eyes are in no danger of developing ocular neovascularization and associated serious complications, and only a proportion of the eyes with ischemic-type hemi-central retinal vein occlusion have such a risk [6], in contrast to that, in our study, almost all eyes with major retinal vein occlusion involving half of the retina have been of the ischemic type, with a very high risk of ocular neovascularization and associated complications. Also, development of hemi-central retinal vein occlusion in a patient with ocular hypertension is an indication for treatment of ocular hypertension, because available evidence indicates that raised intraocular pressure is a risk factor for development of central or hemi-central retinal vein occlusion, but not for major branch retinal vein occlusion.

Thus, the conclusions of the paper by de Irazazabal et al. have no scientific basis, are ill-conceived, and are based on lack of adequate knowledge of the subject. The contention of the authors that clinically there is no justification for differentiating between major branch retinal vein occlusion and hemi-central retinal vein occlusion is unwise, misleading and dangerous.

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References

Sohan Singh Hayreh, MD, PhD, FRCS,
Professor of Ophthalmology,
Department of Ophthalmology,
T. The University of Iowa Hospitals and Clinics,
Iowa City
IA 52242 (USA)