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Use of ophthalmic B-scan ultrasonography in determining the causes of low vision in patients with diabetic retinopathy

Dear Editor,

We read with interest the article by Mohamed et al. regarding the use of ophthalmic B-scan ultrasonography in determining the causes of low vision in patients with diabetic retinopathy [1]. We congratulate the authors for this successful article and would like to make some contributions.

The authors reported overall sensitivity and specificity for the performance of ophthalmic ultrasound in the detection of low vision causes in diabetic patients of 98.9% and 85.7% respectively [1]. Surgical findings of pars plana vitrectomy in different ocular disorders validated overall sensitivity of ultrasound in identifying the anatomical position of the retina up to 97.7% of patients [2,3]. In patients with more complex findings such as choroidal detachment and tractional retinal detachment, the agreement between the ultrasound and the surgical findings is slightly lower, 92% [5] and 92.2% [3] respectively. The main sources of discrepancy between ultrasound and clinical findings are dynamic nature of the surgical procedure, high reflectivity present in cases of posterior vitreous detachment and complicated echoes in eyes with proliferative diabetic retinopathy and tractional retinal detachment [2,5].

In ophthalmic patients planned for surgical treatment due to various posterior eye segment conditions, preoperative ultrasonography can establish a completely new diagnosis and change the initial treatment plan in 4.8%–8% of patients, and sub-classify the diagnosis, therefore help further operative planning in up to 13% of patients [2,4]. When taking into account only patients with poor posterior eye segment visualization, which is a case in many diabetic patients, this percentage is even higher, 9% and 20% respectively [2].

Overall, we agree with Mohamed et al. that ultrasound remains useful part of ophthalmic examination for the detection and evaluation of diabetic retinopathy complications. Therefore, ophthalmic ultrasound examination performed even with limited resources can provide essential information that, if properly interpreted, can facilitate further treatment.

Conflict of interest

The authors have declared no conflict of interest.

Source(s) of support

None.

Declaration of interest

None.

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