SUMMARY

The evaluation of the posterior vitreoretinal interface is important in the study of the natural course and preoperative evaluation of numerous disorders of the retina especially PDR. The contact B-scan ultrasound provided an accurate method for evaluating the posterior vitreoretinal interface.

The aim of this work is to study the role of diagnostic ophthalmic ultrasonography in the evaluation of the vitreo-retinal interface in diabetic patients suffering from diabetic retinopathy with opaque ocular media.

This study was conducted on 50 eyes of 43 randomly selected diabetic patients suffering from diabetic retinopathy with some form of opaque ocular media who attended the outpatient ophthalmic clinic.

The study was conducted on 43 patients, 16 patients were males (37.20%) and 27 patients were females (62.79%). The age of the selected patients ranged from 40 to 80 years, the mean was 63.22+ 8.35 years. 15 patients were IDDM (34.88%) and 28 patients were NIDDM (65.11%). The duration of D.M ranged from 10 to 32 years. The mean was 18.39 ± 4.645 years. 24 eyes (48%) received previous LASER treatment. The visual acuity of eyes included in the study ranged from PL to 5/60 (with full correction).

DIFFERENT CHANGES OF VITREORETINAL INTERFACE IN DR WITH OPAQUE OCULAR MEDIA:

Posterior vitreous detachment (PVD):

In this study, PVD was detected by ultrasound examination in 39 eyes (78%) and could not be detected clinically due to presence of opaque ocular media.

In 9 eyes (30.07%), PVD was total while in the remaining 30 eyes (76.92%), PVD was partial. A no PVD was found in 11 eyes (22%)

Vitreous haemorrhage:

In this study, Vitreous haemorrhage was detected by both clinical and ultrasound examination in 18 eyes (36%).

In the 18 eyes where ultrasound could detect vitreous haemorrhage, there were underlying pathology which could be detected only by ultrasound.

Vitreous membranes:

In this study vitreal membranes were detected only by ultrasound examination in 9 eyes (18%) and could not be detected clinically due to presence of opaque ocular media (cataract).

Preretinal haemorrhage:

In this study preretinal haemorrhage could not be detected clinically and detected only by ultrasound examination in 3 eyes (6%) due to presence of vitreous haemorrhage.

Subretinal haemorrhage:

In this study, subretinal haemorrhage could be detected only by ultrasound in one eye under tractional retinal detachment. This finding could not be detected clinically due to overlying TRD and vitreal membranes.

Tractional retinal detachment (TRD):

In this study, TRD was not detected clinically due to presence of opaque ocular media and detected only by ultrasound in 8 eyes (16%).

Macular thickening:

In this study macular thickening could be detected only by ultrasound in 3 eyes (6%) and could not be detected clinically due to presence of cataract.

It was found that ultrasound is adequate to determine vitreoretinal relationships in eyes with clear media and it is a good alternative to biornicroscopy in eyes with significant media opacities.

It was reported that ultrasonography has a definite role in the diagnosis and management of retinal detachment. It was also reported that, in patients with vitreous haemorrhage, important therapeutic considerations depend upon a precise knowledge of the structure of the vitreous and retina and complicating features such as vitreous fibrosis or retinal detachment and these features can be accurately detected by echography.

Ultrasonography is also useful for monitoring progression of the disease and in pre-vitrectomy evaluations to determine the timing of surgery, the optimal placement of instruments, and the visual prognosis.