The efficacy of vital dyes in PVR surgery.

A variety of dyes stain different ocular structures.

Nonproliferative diabetic retinopathy (NPDR) is the earliest stage of diabetic retinopathy, characterised by damaged blood vessels in the retina that begin to leak in chorioretinopathy in a text- (Meyer, 2008) and formed an ‘International Chromovitrectomy Ini- tiative’. For the EURETINA meeting in September 2013 we summarised the key developments and novel perspectives in a separate supplement issue in the Journal of Ophthalmological India.

Vitrectomy surgery is performed for a variety of reti- nal diseases, including symp- tomatic vitreomacular adhesion, diabetic macula oedema, macular hole, and epiretinal membrane (ERM). Vitreous traction from the posterior hyaloid on the retinal surface has been linked to the pathogenesis of proliferative vitreoretinopathy (PVR), proliferative diabetic vitreoretino- pathy (PVDV) and other conditions. Surgery attempts to release the three predominant tractional components: the vitreous from the retinal surface including the posterior hyaloid, the ERM, and the internal limiting membrane (ILM).

The main difficulty remains to visu- alise the thin and semitransparent structure, namely the vitreous or the internal limiting membrane (ILM). Different various intraretinal structures have a different affinity to dif- ferent dyes: while triamcinolone aceto- nine (TA) stains cellular structures e.g. the ERM, indocyanine green (ICG) has a good staining affinity for the ILM. In 2008, we summarised for the first time the benefits and potential risks of vital dyes in chorioretinopathy in a text- hbook (Meyer, 2008) and formed an ‘International Chromovitrectomy Ini- tiative’. For the EURETINA meeting in September 2013 we summarised the key developments and novel perspectives in a separate supplement issue in the Journal of Ophthalmological India.

Vitreal staining
A better and complete separation of the disease process may be involved in disease progression.

The RET02 trial is a one-year observational and prospective study to identify phenotypes of retinopathy progression. 37% type 2 diabetic patients (65.4% males and 34.6% females at the age of 35 to 82 years) with mild NPDR (ETDRS levels 20 or 25) were enrolled. The trial was conducted at 19 clinical sites of the European Vision Institute Clinical Research Network (EVICR.net); it started in September 2010 and was concluded in July 2013. Four visits were scheduled at months 0, 3, 6 and 12 with the following exami- nations: colour fundus photography (CFP), spectral domain optical coherence tomography (SD-OCT) and blood tests. ETDRS severity levels at the first and last visits were compared with microaneu- vascular diseases (MA) turnover [for- mation plus disappear- ance] evaluated by the Retmarker® were evaluated by the Coimbra Ophthalmological Research Centre (CROP-OC OCT and/or Spectralis were used to measure retinal thickness (RT). One eye per patient was selected by the Reading Centre as the study eye. At baseline, the mean best-corrected visual acuity (BCVA) was 84.8±4.6 ETDRS letters. Mean HAbaC was 7.7±4.2%, the numbers of systolic and diastolic blood pressure were 137.7±16.6 and 77.4±10.1 mmHg, respectively. Eyes/patients showed a mean number of MA of 3.6±5.2 at baseline. The mean retinal thickness in the central subfield was 265.0±21.8 µm for Cirrus OCT and 278.4±26.6 µm for Spectralis OCT. Males showed a higher retinal thickness than females [p=0.05]. A wide range of abnormal RT values was observed, from higher ILM staining of all dyes under evalu- ation. Hartung and colleagues described the staining and biocompati- bility properties of a new cyanine dye ICG. Diabetic retinopathy progression. 375 type 2 diabetic patients (65.4% males and 34.6% females at the age of 35 to 82 years) with mild NPDR (ETDRS levels 20 or 25) were enrolled. The trial was conducted at 19 clinical sites of the European Vision Institute Clinical Research Network (EVICR.net); it started in September 2010 and was concluded in July 2013. Four visits were scheduled at months 0, 3, 6 and 12 with the following exami- nations: colour fundus photography (CFP), spectral domain optical coherence tomography (SD-OCT) and blood tests. ETDRS severity levels at the first and last visits were compared with microaneu- vascular diseases (MA) turnover [for- mation plus disappear- ance] evaluated by the Retmarker® were evaluated by the Coimbra Ophthalmological Research Centre (CROP-OC OCT and/or Spectralis were used to measure retinal thickness (RT). One eye per patient was selected by the Reading Centre as the study eye. At baseline, the mean best-corrected visual acuity (BCVA) was 84.8±4.6 ETDRS letters. Mean HAbaC was 7.7±4.2%, the numbers of systolic and diastolic blood pressure were 137.7±16.6 and 77.4±10.1 mmHg, respectively. Eyes/patients showed a mean number of MA of 3.6±5.2 at baseline. The mean retinal thickness in the central subfield was 265.0±21.8 µm for Cirrus OCT and 278.4±26.6 µm for Spectralis OCT. Males showed a higher retinal thickness than females [p=0.05]. A wide range of abnormal RT values was observed, from higher ILM staining of all dyes under evalu- ation. Hartung and colleagues described the staining and biocompati- bility properties of a new cyanine dye ICG. Diabetic retinopathy progression. 375 type 2 diabetic patients (65.4% males and 34.6% females at the age of 35 to 82 years) with mild NPDR (ETDRS levels 20 or 25) were enrolled. The trial was conducted at 19 clinical sites of the European Vision Institute Clinical Research Network (EVICR.net); it started in September 2010 and was concluded in July 2013. Four visits were scheduled at months 0, 3, 6 and 12 with the following exami- nations: colour fundus photography (CFP), spectral domain optical coherence tomography (SD-OCT) and blood tests. ETDRS severity levels at the first and last visits were compared with microaneu- vascular diseases (MA) turnover [for- mation plus disappear- ance] evaluated by the Retmarker® were evaluated by the Coimbra Ophthalmological Research Centre (CROP-OC OCT and/or Spectralis were used to measure retinal thickness (RT). One eye per patient was selected by the Reading Centre as the study eye. At baseline, the mean best-corrected visual acuity (BCVA) was 84.8±4.6 ETDRS letters. Mean HAbaC was 7.7±4.2%, the numbers of systolic and diastolic blood pressure were 137.7±16.6 and 77.4±10.1 mmHg, respectively. Eyes/patients showed a mean number of MA of 3.6±5.2 at baseline. The mean retinal thickness in the central subfield was 265.0±21.8 µm for Cirrus OCT and 278.4±26.6 µm for Spectralis OCT. Males showed a higher retinal thickness than females [p=0.05]. A wide range of abnormal RT values was observed, from higher