Innovative therapies and future integrated solutions can enhance management of diabetic eye disease

Praveen Patel
Moorfields Eye Hospital
London, UK

In this presentation Mr Praveen Patel, Consultant Ophthalmic Surgeon at Moorfields Eye Hospital (UK), will provide an overview of the ophthalmic complications of diabetes with a focus on diabetic retinopathy (DR) and diabetic macular edema (DME). Screening approaches and methods of diagnosis as well as the current and possible future therapeutic options for DR/DME are reviewed.

Diabetes is associated with the development of ocular complications including glaucoma, cataract, DR and DME. DR is the leading cause of blindness among working-age adults; the most common cause of vision loss from DR is DME. Of the estimated 420 million people with diabetes mellitus worldwide over 21 million have DME and this number is estimated to grow to 600 million by 2035.

DR/DME is an important public health problem; early treatment can reduce the risk of vision loss and be cost-effective to society. Most imaging modalities that are used for screening and diagnosis are non-invasive and require only a few seconds to perform. However manual grading of images is labour intensive and subject to human error. Artificial intelligence can be used to alleviate the screening burden on human graders and improve diagnostic accuracy.

Intraocular anti-VEGF treatments have transformed the way in which DME is treated but opportunities still exist to improve treatment outcomes for patients by addressing the multifactorial nature of the disease, improving the durability of treatment and improving long term visual gains.