

## Screening for diabetic retinopathy: New methods to come

Sir,

Diabetes is a commonly discussed disease condition for its effects on almost each system of human body. The macro as well microvascular complications of diabetes are detrimental for the important organs. Ophthalmological involvement of the disease is of much concern as it can result in blindness. Hence, the search is going on an optimum method for screening of diabetic retinopathy so that early detection of any problem can be diagnosed as well as treated.

Early detection and treatment can halt complications of diabetic retinopathy (DR) to a great extent. A nation-wide drive to screen for DR has already been launched from November 14<sup>th</sup>–20<sup>th</sup> 2014. Studies were able to demonstrate that early treatment can result in a reduction of the risk of vision loss by 57%. Apart from dilated fundoscopic examination, several other alternatives such as digital nonmydriatic retinal imaging (NMRI) technique has been developed to include a larger number of patients under screening program for DR. However, the sensitivity and specificity of NMRI technique have been found to be around 60% and 70%, respectively. The presence of the cataract in older patients limits its proper practical implications.<sup>[1]</sup> A pilot study has demonstrated the success of automated DR imaging for screening in Indian population.<sup>[2]</sup>

Recently, a retrospective cohort analysis of 15,015 diabetics underwent a retinal screening and nonmydriatic fundus photography through Intelligent Retinal Imaging System (IRIS). The IRIS computer algorithm-based screening program showed high sensitivity and a low false-negative rate. Further, data are required so that such screening methods become

more patient-friendly, cost-effective. Application of this type of algorithm can be pursued for the better understanding of the contribution of teleretinal imaging as well as automated analysis in the case of diabetic patients.<sup>[3]</sup>

Data on literature have also showed that reduced visual acuity may predict inaccuracy in image analysis in patients screened for DR by nonmydriatic retinal photography.<sup>[4]</sup> Proper utilization of these techniques needs more information. However, undoubtedly future will provide promising result in this field.

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### Conflicts of interest

There are no conflicts of interest.

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