

A Descriptive Analysis of Patients' Fundus Photographs Presenting for Diabetic Retinopathy Screening at University Hospital, KDU

KAE Fernando^{1#}, HTRW Dissanayake², WMDKB Weerasinghe³ and MMPN Piyasena⁴

¹University Hospital of General Sir John Kotelawala Defence University

Faculty of Medicine, General Sir John Kotelawala Defence University, Sri Lanka

^{2,3}University Hospital of General Sir John Kotelawala Defence University, Sri Lanka

⁴National Eye Hospital, Colombo, Sri Lanka

[#]dr.aruna.fernando@gmail.com

Digital Retinal Imaging is an established and efficient modality of screening diabetic patients for retinopathy in most countries. Sri Lanka is yet to establish a national screening programme for all diabetic patients. The University Hospital of Sir John Kotelawala Defence University is conducting diabetic retinopathy screening using digital fundus photographs of patients. This minimises physically examining patients with diabetes using mydriatic bio-microscopy and streamlines management protocols at clinics. Of all patients seen at the clinic (2271) during a 5-month period, 554 (24.4%) were identified as having diabetes, and they underwent mydriatic retinal imaging. Patients having poor image quality due to media opacity (E.g. cataract) in either one or both eyes were excluded & physically examined (n-101, 18.23%). Images were analysed by a consultant ophthalmologist and graded according to the ETDRS grading. The grade of the worst affected eye was taken for interpretation. Four hundred fifty three (453) patients (81.77%) having diabetes had both eyes assessed. Mild or no retinopathy was found in 394 (86.97%). Moderate and severe retinopathy was found in 32(7.06%) and 19 (4.19%) patients respectively. Proliferative retinopathy was found in 8 (1.76%) patients. Nomenclature was found in 352 (77.7%). Early maculopathy in 77(17.0%) patients, clinically significant macular oedema(CSME) or treated maculopathy was noted in 24 (5.3%) patients. A majority of diabetic patients (81.77%) coming to the clinic, could be successfully screened using only digital fundus photography. Of the screened patients, more frequent screening or a clinic visit for treatment was required in 13.03% for retinopathy and 22.3% for maculopathy. The majority needed one year follow up funduscopy screening for retinopathy (86.97%) and for maculopathy (77.7%).

Keywords: Diabetic retinopathy screening, Fundus photography, University hospital KDU