

## **Diabetic retinopathy among type 2 diabetes mellitus patients in Sabah primary health clinics—Addressing the underlying factors**

### **ABSTRACT**

Every person diagnosed with diabetes mellitus (T2DM) is at risk of developing Diabetic retinopathy (DR). Thus, DR is one of the major chronic microvascular complications of T2DM. However, in Malaysia, research about DR is still scarce. This study aimed to determine the prevalence of DR among diabetic patients across 46 primary healthcare clinics in Sabah, Malaysia. Secondly, it purported to identify the factors influencing the development of DR. This cross-sectional study involved a total of 22,345 Type 2 diabetes mellitus (T2DM) patients in the Sabah Diabetic Registry from 2008 to 2015. Of the 22,345 T2DM patients, 13.5% (n = 3,029) of them were diagnosed with DR. Multiple logistic regression revealed seven major risk factors of DR, i.e. patients with diabetic foot ulcer [aOR: 95% CI 3.08 (1.96–4.85)], patients with diabetic nephropathy [aOR: 95% CI 2.47 (2.13–2.86)], hypertension [aOR: 95% CI 1.63 (1.43–1.87)], dyslipidaemia [aOR: 95% CI 1.30 (1.17–1.44)], glycated haemoglobin [(HbA1c) > 6.5 (aOR: 95% CI 1.25 (1.14–1.38))], duration of diabetes mellitus (T2DM) [aOR: 95% CI 1.06 (1.05–1.07)] and age of patient [aOR: 95% CI 1.01 (1.00–1.02)] respectively. DR is a preventable complication. The effective glycaemic control is crucial in preventing DR. In minimizing the prevalence of DR, the healthcare authorities should institute programmes to induce awareness on the management of DR's risk factors among patient and practitioner.