Measurement of the Cut Off Score of Visual Function Questionnaire on Vision Related Quality of Life to Predict Severity of Diabetic Retinopathy

Fauziah Hayati, Arief Kartasasmita, Mayang Rini, Feti Karfiati
Department of Ophthalmology, Faculty of Medicine, Padjadjaran University
Cicendo National Eye Center, Bandung, West Java

ABSTRACT

Background: Diabetic retinopathy has a negative impact on quality of life. In order to investigate the effects of visual impairment in self-perception of quality of life, vision related questionnaires such as the National Institute Visual Function Questionnaire (NEI-VFQ-25) has been developed. The aim of this study is to predict severity of diabetic retinopathy using NEI-VFQ-25 Version 2000 by measuring the cut off score of visual function questionnaire on vision related quality of life.

Methods: Cross Sectional study by examining 49 diabetic retinopathy patients who meet the inclusion criteria. All patients requested to answer the questionnaire. All question have a score and all question scores then categorized into a number of subscales that can be averaged to yield the subscale scores (lowest to highest range 0-100). Higher score on the VFQ–25 indicates better visual function and health related quality of life. Average scoring then being analyzed by ROC curve in order to gain the cut off score value between retinopathy and sight threatening diabetic retinopathy.

Results: The cut off score value between retinopathy and sight threatening diabetic retinopathy is 90.90. The VFQ-25 classification score is in the range of <90.90 consider threatening diabetic retinopathy and ≥90.90 consider retinopathy.

Conclusion: VFQ-25 is one of the instruments to confirm that diabetic retinopathy significantly impair quality of life. The cut off score value between retinopathy and sight threatening diabetic retinopathy is 90.90.

Keywords: Diabetic retinopathy, NEI-VFQ-25

Diabetes mellitus is an important public health problem worldwide. WHO has estimated that there were 171 million people worldwide with diabetes mellitus in 2000 and predicted that 366 million people will have diabetes mellitus by 2030. The Incidence of diabetes in the Asian population also seems to be on the rise. The rise in prevalence is more in developing countries, of 170 % compared to 42 % in developed countries to the year 2025. In Indonesia, the number of adults with diabetes is expected to rise from 6.9 million in 2010 to 12 million in the year 2030.

Common micro vascular complication of diabetes is diabetic retinopathy. Diabetic retinopathy is leading cause of visual impairment. WHO estimated that diabetic retinopathy is responsible for 4.8% of the 37 million cases of blindness throughout the world. More than 75%