Determinants of comorbidity in rheumatoid arthritis: influence of demographic and duration of illness

ABSTRACT

Rheumatoid arthritis (RA) is a chronic, disabling autoimmune disease which affects about 5 in 1000 people in Malaysia. Patients with RA are at increased risk of developing comorbid conditions. This research aims at determining these relationships between demographic, duration of illness and comorbidity in RA via a multiple binary logistic (MBL) regression analysis based on the 102 patients' information (23 males; 79 females) obtained from the rheumatoid clinic of the Queen Elizabeth Hospital in Kota Kinabalu. The relationship of the RA patients with comorbid conditions was studied with focus on the demographic and duration of illness. The variables obtained for analysis were the comorbid conditions namely, hypertension and hyperlipidemia, age, duration of illness, gender, ethnicity, household income and education level. From six independent variables, two were quantitative would be analyzed, while four were categorical, and would be transformed into dummy variables. Four phases in a model-building approach were executed where two models were formed where Model I predicted the probability of occurrence of hypertension with age of patients and first order interaction between duration of illness before diagnosis and household income of less than RM1000 had positive effects on the model, while Model II predicted the occurrence of hyperlipidemia among the RA patients with age of patients and first order interaction variable between gender(female) and age were the contributing factors.