Lupus Auto-antibodies and Clinical Outcomes Among Jamaican SLE Patients

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Background The purpose of this study is to correlate lupus antibodies with clinical features of Jamaican SLE patients and assess their predictive value.

Materials and Methods The study was guided by two research questions. To answer these questions, an ex-post facto research design was used. This design was used because the subjects had Lupus before treatments, which paved the way for a retrospective study of possible relationships and effects of the treatments to be conducted. The sample size used was \( n = 136 \). Between May 2009 and December 2010, 136 SLE patients were tested for auto-antibodies.

Results Fifty five percent were positive for anti-ssDNA, 35% positive for anti-dsDNA, 46% for anti-Sm, 83% for anti-RNP/Sm, 76% for anti-Ro, 31% for anti-La, 30% for anti-histone and 65% for anti-chromatin. After a mean follow up of 4.5 years, the findings showed that elevated ssDNA and dsDNA in the initial samples were predictive of proteinuria, while elevated anti-Sm levels were predictive of proteinuria, low haemoglobin, lymphopenia and increased heart rate. The results of the Pearson Product Moment Correlation showed a weak to moderate relationships between ssDNA and Creatinine \( (r = 0.209, p < 0.05) \), DMARD use \( (r = 0.226, p < 0.05) \), Proteinuria \( (r = 0.286, p < 0.01) \), and Average Prednisone Dose (APD) \( (r = 0.363, p < 0.01) \). A weak to moderate relationships were also observed between dsDNA and Hb \( (r = -0.218, p < 0.05) \), Proteinuria \( (r = 0.399, p < 0.01) \), and APD \( (r = 0.457, p < 0.01) \). Anti SM correlated with Proteinuria \( (r = 0.374, p < 0.05) \) while anti RNP/SM correlated with Hb \( (r = 0.304, p < 0.05) \), and anti-Histone correlated with Proteinuria \( (r = 0.461, p < 0.05) \). The simple regression analysis conducted to examine if SM be used to predict heart rate, Hb, and Lymphocytes. The results were significant: Hb \( (R^2 = 0.217, F = 23.843, p < 0.01) \); Hb and APD \( (R^2 = 0.262, F = 15.070, p < 0.01) \); and Hb, APD and organ involvement \( (R^2 = 0.305, F = 12.311, p < 0.01) \).

Conclusions This retrospective study showed that elevated ssDNA and dsDNA in the initial samples were predictive of proteinuria, while elevated anti-Sm levels were predictive of proteinuria, low haemoglobin, lymphopenia and increased heart rate.