



## **REPOLARIZATION CHANGES IN SYSTEMIC LUPUS ERYTHEMATOSUS. AN ELECTROCARDIOGRAM STUDY**

Marília Bulhões Calheiros (UNICAMP, Campinas, SP, Brasil), Douglas Francisco de Carvalho (UNICAMP, Campinas, SP, Brasil), Samuel de Oliveira Andrade (UNICAMP, Campinas, SP, Brasil), Lilian TL Costallat (UNICAMP, Campinas, SP, Brasil), SIMONE APPENZELLER (UNICAMP, Campinas, SP, Brasil)

### **BACKGROUND**

Several drugs frequently used in Systemic Lupus Erythematosus (SLE) are associated with electrocardiographic changes of repolarization such as QT prolongation. The aim of this study was to determine the frequency of QT prolongation and determine factors associated with its occurrence.

### **MATERIALS AND METHODS**

This is a cross-sectional study that included 94 patients diagnosed with SLE according to the American College of Rheumatology criteria. The electrocardiograms were performed in outpatients between 2017 and 2018 and were analyzed by an experienced professional. The prevalence of traditional and SLE related cardiovascular risk factors, such as systemic arterial hypertension, diabetes mellitus, body mass index (BMI), dyslipidemia, smoking, previous cardiovascular disease and drugs with a potential for QT prolongation were analyzed through chart review.

### **RESULTS**

The mean age of the patients was 41.5 years ( $\pm 12.9$ ), being 94.7% female with a median disease duration of 11.3 years. We observed a frequency of dyslipidemia in 74.6, systemic arterial hypertension in 58.5%, obesity in 23%, diabetes mellitus in 13.5%, previous cardiovascular disease in 9.5% and current smoking in 5.3% of the patients. Electrocardiographic changes were detected in 51% SLE patients. The main findings in decreasing order were: 40.5% with QT enlargement, inversion of T wave in two contiguous leads in 11.7% and pathological Q wave in two contiguous leads in 6.3%. Other alterations found to a lesser extent were atrial and left ventricular overload, anterosuperior divisional block, right and left bundle branch block, right atrial overload, and poster inferior hemiblock. 28% of patients use drugs that increase QT, and an association between drugs and QT prolongation was observed ( $p=0.04$ ).

### **CONCLUSION**

Electrocardiographic abnormalities are frequently observed in SLE. ECG analysis should be regular performed in SLE patients, especially in patients using medications that cause QT prolongation.