ASSOCIATION OF CARDIAC TROPONIN T MEASURED WITH A HIGHLY SENSITIVE ASSAY WITH CARDIOVASCULAR EVENTS IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS (TROPOPLUS STUDY)

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Background: Mortality is still 2 to 5 times superior in SLE patients as compared to general population and is mainly due to cardiovascular event (CVE). Although cardiovascular traditional risk factors contribute to early-onset atherosclerosis in SLE, the phenomenon is not fully explained by a higher frequency of smoking habits, hypertension, or dyslipidemia and the Framingham risk equation usually underestimated the 10-year cardiovascular risk in this population. Thus, identification of biological markers able to better stratify cardiovascular risks in SLE patients is needed.

Objectives: Our study aimed to determine whether serum cardiac troponin T measured with a highly sensitive assay (HS-cTnT) was associated with CVE in systemic lupus erythematosus (SLE) patients.

Methods: All SLE patients included between 2007 and 2010 in the randomized, double-blind, placebo-controlled, multicenter PLUS trial were retrospectively screened. Patients with no past history of CVE and a follow-up period of > 20 months were analyzed. HS-cTnT concentration was measured using the electrochemiluminescence method on serum collected at PLUS inclusion. The primary outcome was the incidence of CVE. Factors associated with the primary outcome were identified and multivariate analysis was performed.

Results: Overall, 442 SLE patients (of the 573 included in the PLUS study) were analyzed for the primary outcome with a median follow up of 110 (IQR: 90-120) months. Among them 29 (6.6%) experienced at least one CVE that occurred at a median of 67 (IQR: 31-91) months after inclusion. Six out of 29 patients had more than one CVE. In the multivariate analysis, dyslipidemia, duration of SLE disease and HS-cTnT were associated with the occurrence of CVE. Kaplan-Meier analysis showed that a concentration of HS-cTnT > 0.27 ng/L at inclusion increased by 2.7 (HR 2.7 [1.3-5.6], p=0.0083) the risk of CVE in SLE.

Conclusion: HS-cTnT measured in serum is the first identified biomarker independently associated with incident CVE in SLE patients.


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C4 LEVELS AS PREDICTOR OF DISEASE FLARES AND ADVERSE PREGNANCY OUTCOMES IN SYSTEMIC LUPUS ERYTHEMATOSUS PREGNANCIES

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Background: SLE pregnancies have an increased risk of Adverse Pregnancy Outcomes (APO). In clinical practice, low C3 and C4 levels are associated with APO. Therefore, the phenomenon is not fully explained by a higher frequency of smoking habits, hypertension, or dyslipidemia and the Framingham risk equation usually underestimated the 10-year cardiovascular risk in this population. Thus, identification of biological markers able to better stratify cardiovascular risks in SLE patients is needed.

Objectives: Our study aimed to determine whether serum cardiac troponin T measured with a highly sensitive assay (HS-cTnT) was associated with CVE in systemic lupus erythematosus (SLE) patients.

Methods: All SLE patients included between 2007 and 2010 in the randomized, double-blind, placebo-controlled, multicenter PLUS trial were retrospectively screened. Patients with no past history of CVE and a follow-up period of > 20 months were analyzed. HS-cTnT concentration was measured using the electrochemiluminescence method on serum collected at PLUS inclusion. The primary outcome was the incidence of CVE. Factors associated with the primary outcome were identified and multivariate analysis was performed.

Results: Overall, 442 SLE patients (of the 573 included in the PLUS study) were analyzed for the primary outcome with a median follow up of 110 (IQR: 90-120) months. Among them 29 (6.6%) experienced at least one CVE that occurred at a median of 67 (IQR: 31-91) months after inclusion. Six out of 29 patients had more than one CVE. In the multivariate analysis, dyslipidemia, duration of SLE disease and HS-cTnT were associated with the occurrence of CVE. Kaplan-Meier analysis showed that a concentration of HS-cTnT > 0.27 ng/L at inclusion increased by 2.7 (HR 2.7 [1.3-5.6], p=0.0083) the risk of CVE in SLE.

Conclusion: HS-cTnT measured in serum is the first identified biomarker independently associated with incident CVE in SLE patients.


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