180. MODERN ASPECTS OF THE LABORATORY DIAGNOSIS OF THE SYSTEMIC LUPUS ERYTHEMATOSUS

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Introduction. Systemic lupus erythematosus (SLE) is a chronic, multisystem autoimmune disease with a highly variable clinical course, that usually develops in young women and is characterized by the presence of a wide profile of utoantibodies. SLE is a non-infectious autoimmune disease, that cannot be cured, but it can be controlled. The long-term prognosis for SLE has improved markedly in recent decades because of earlier diagnosis.
Aim of the study. update the aspects of the laboratory diagnosis of the SLE.
Materials and methods. A literature review on the aspects of the laboratory diagnosis of the SLE was made, using a search of electronic databases such as PubMed and the MedLine Library, including current guidelines and expert recommendations.
Results. SLE is a multi-organ system autoimmune disease with clinical and serological heterogeneity, which can represent a challenge for physician in terms of diagnosis. If there is a clinical suspicion of lupus, blood tests (including serological marker tests) should be checked. Serum anti-nuclear antibody (ANA), anti-ds-DNA antibody and anti-Smith (Sm) antibody are important biomarkers. ANAs are present in ~95% of SLE patients. The presence of anti-ds-DNA antibodies, low complement levels or anti-Sm antibodies are highly predictive of a diagnosis of SLE in patients with relevant clinical features. Anti-Ro/La and anti-RNP antibodies are lessspecific markers of SLE as they are found in other autoimmune rheumatic disorders as well as SLE. Tumor necrosis factor or soluble Interleukin-2 receptor values may reflect disease activity, but they are not specific for SLE. IgG antinucleosome antibodies have proven to be helpful in diagnosis of patients in the absence of anti-dsDNA or anti-Sm antibodies. A systemic review and meta-analysis showed that anti-nucleosome antibodies may actually be more sensitive than antidsDNA antibodies in the diagnosis of SLE (59.9% vs. 52.4%). Anti-ribosomal P antibody is another potential biomarker for the diagnosis of SLE, with a high specificity (99.4%), but low sensitivity (14.2%). T serum anti-C1q antibody and urinary monocytic chemoattractant protein-1 (UMCP-1) may be valuable biomarkers for lupus nephritis. Interferon-α is a potential biomarker for certain forms of neuropsychiatric involvement.
Conclusions. SLE is a heterogeneous disease in which diagnosis is not always easy. There is still no available biomarker that is pathognomonic forthe disease. Currently, the diagnosis of SLE still requires “old-fashioned” clinical acumen with the assistance of standardized clinical and laboratory criteria. Further diagnostic investigations depend on the symptoms of SLE and should be carried out in cooperation with medical specialists from the appropriate disciplines.
Key words: Systemic lupus erythematosus, autoantibodies, biomarkers.