SERO-CLINICAL ASPECTS OF AUTOANTIBODIES TO A PM/SCL PEPTIDE WITH SPECIAL EMPHASIS ON A COHORT OF 495 SYSTEMIC SCLEROSIS PATIENTS

M. Mahler [1], M. Koenig [2], J.L. Senécal [2], E. Csernok [3], F.C. Arnett [4], G. Riemekasten [5], M.J. Fritzler [6]
[1] Dr. Fooke Laboratorien GmbH, Neuss, Germany; [2] Division Of Rheumatology, CHUM, University Of Montréal, Montréal, QC, Canada; [3] Rheumaklinik Bad Bramstedt, Bad Bramstedt, Germany; [4] Division Of Rheumatology, University Of Texas-Houston Medical School, Housten, TX, USA; [5] German Rheumatology Research Center, Berlin, Germany; [6] Faculty Of Medicine, University Of Calgary, Calgary, AB, Canada

Antibodies to the Polymyositis/Scleroderma (PM/Scl) complex known as a serological marker for a PM/Scl overlap syndrome are traditionally detected by indirect immunofluorescence (IIF) on HEp2-cells (nucleolar pattern) as a first screening test and confirmed by immunodiffusion and immunoblot. In previous studies a PM/Scl-100 peptide (PM1-Alpha) was identified and found to be a reliable marker for anti-PM/Scl antibodies. The present multi-center study was addressed to investigate anti-PM1-Alpha reactivity in Scl. Scl patient sera (n=495) were collected in three centers (Houston; Montréal and Berlin). Detailed chart reviews were available from two centers and used to establish sero-clinical associations. A second panel of samples (n=70) was collected based on a nucleolar IIF pattern in a routine clinical laboratory setting. All samples were tested for anti-PM1-Alpha antibodies by ELISA (Dr. Fooke Laboratorien GmbH, Neuss, Germany) using a cut-off of 1.5 relative units (RU). Anti-PM1-Alpha antibodies were detected in 7.1% of 495 Scl patients. The frequency of these antibodies among the three centers varied between 5.9% and 7.8%. Also, 15.7% of 70 samples with nucleolar pattern had anti-PM1-Alpha reactivity. No statistically relevant correlation could be observed between anti-PM1-Alpha and clinical features such as muscle, skin, heart or lung involvement. Anti-PM1-Alpha antibodies are found in 7.1% of Scl patients with no significantly different frequency among the different geographical centers and no significant sero-clinical correlation. Anti-PM1-Alpha antibodies represent an important subpopulation of nucleolar autoantibodies identified in 15.7% of samples with a nucleolar IIF pattern. Therefore, analysis of anti-nucleolar antibody positive samples should include testing for anti-PM1-Alpha antibodies.