

13 A NOVEL FORM OF IMMUNE INFLAMMATORY MYOPATHY ASSOCIATED WITH ANTIBODIES TO γ/δ SARCOGLYCAN

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Immune mediated inflammatory myopathies are a heterogeneous group of acquired diseases characterised by inflammation of skeletal muscle. In recent years, this group of conditions has become better characterised by the detection of autoantibodies to a number of intracellular proteins. The authors have identified three patients with a novel, progressive inflammatory myopathy, associated with circulating IgG antibodies to γ/δ -sarcoglycan, two proteins which form part of the sarcolemmal dystrophin-glycoprotein complex. All three patients responded to steroids initially, with a rapid decrease in CK levels to normal levels, and plasma exchange undertaken in two also produced additional temporary improvement.

The patients presented with proximal weakness in the upper and lower limbs, with high CK levels (>2000 IU/L). Patient 3 also had mild facial and neck weakness and dysphagia. With disease progression, distal weakness developed in the upper limbs in a pattern consistent with inclusion body myositis (IBM) but the quadriceps, normally markedly affected in IBM, remained spared. Muscle biopsies showed inflammation, with rimmed vacuoles and dystrophic changes similar to those seen in IBM, but the inflammation included prominent accumulations of CD4+T lymphocytes and plasma cells, together with membrane attack complex deposition on muscle fibres and endothelium.

Analysis of myositis specific and associated antibodies (Jo-1, PL-7, PL-12, EJ, OJ, SRP, PM-Scl (75Kd and 100Kd), Ku, Mi-2 β , U1-RNP) was negative. Immunohistochemistry using patients' sera on healthy control muscle revealed uniform immunoglobulin binding to sarcolemma. Western blot of sarcolemmal fractions against patients' sera demonstrated a distinct band of 35 kDa. This antibody was subsequently shown to react with recombinant γ - and δ -sarcoglycan, two proteins of the muscle cell membrane with >80% homology.

These three patients have a novel inflammatory myopathy associated with anti- γ/δ -sarcoglycan autoantibodies. This myopathy appears to be responsive to steroids and plasma exchange. The potential pathogenic role of the autoantibodies in this condition will require further elucidation.