The role of myospecific antibodies in the clinical assessment of polymyositis and dermatomyositis

Over the past several years there have been dramatic advances in defining specific subsets of inflammatory myositis. The use of muscle specific antibodies (MSAs) have facilitated the diagnosis and treatment of dermatomyositis and polymyositis. MSAs are markers of very specific disease entities within the spectrum of myositis; the commonly described target autoantigens include the aminoacyl tRNA synthetases, the most common of which is JO-1 (associated with lung disease, arthritis, Raynaud’s and myositis; the phenotype being either dermatomyositis or polymyositis); SRP (signal recognition particle) associated with necrotizing myopathy, polymyositis and treatment resistant disease and MI-2 (anti-helicase/histone deacetylase protein complex) associated with dermatomyositis absence of lung disease and a favorable response to therapy. These MSAs appear to be selective and mutually exclusive. More recently described antibodies include: Anti-hmgrp (200/100 kd) described by the group at Hopkins and it is associated with necrotizing myopathy associated either idiopathically or in patients exposed to statins; Anti-MDA5 found in dermatomyositis patients with rapidly progressing interstitial lung and skin ulcerations; Anti-tif1gamma found in childhood dermatomyositis and in adults there is a strong association with malignancy; Anti-SAE associated with severe skin disease in dermatomyositis; and anti-nxp2 muscle associated antibodies that are not specific for myositis and are generally more associated with overlap connective tissue disease syndromes. They include PM/SCL, anti-KU, anti-u1rnp and anti-RO-SSA. We have found that MSAs are useful in determining treatment protocols for inflammatory muscle diseases as well as assessing prognosis.

Biography
James J Curran received his Bachelor of Science from Marquette University in 1969. In 1976, he received his Doctor of Medicine from the University of Illinois, College of Medicine. He completed his residency at the National Naval Center in Bethesda, Maryland in 1980 and Fellowship in Rheumatology at the University of Chicago/Michael Reese Hospital Program, in 1982. He returned to the Naval Service as Chief of Medicine, U.S. Naval Hospital Naples, Italy from 1982-84. He then returned to Bethesda Naval Hospital as Chief of Rheumatology and Assistant Professor of Medicine of Uniform Services University. He also served as Consultant Rheumatologist to Congress from 1985-1987. He joined the section of Rheumatology at the University of Chicago in 1987, promoted to Professor of Medicine in 1990 and was selected as a Master by the American College of Rheumatology in 2015. He is a Fellow in the American College of Physicians.

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