RAISED VEGF: USEFULNESS IN THE DIAGNOSIS OF POEMS SYNDROME

Morgane Pihan,1 Michael Lunn,1,3 Shirley D’Sa,2 Kwee Yong,2 Andrew Church,3 Mary Reilly1.1 MRC Centre for Neuromuscular Diseases, UCL Institute of Neurology, London; 2 Department of Haematology, University College London Hospitals; 3 Department of Neuroimmunology, Institute of Neurology

VEGF is diagnostically markedly elevated in patients with POEMS syndrome and is also a disease biomarker. However, VEGF can be elevated in other illnesses, which might be misleading.

We assayed serum VEGF levels from clinical requests in samples from 206 consecutive patients with a neuropathy at Queen Square. Sensitivity and specificity of VEGF in the diagnosis of POEMS were calculated and other potential causes of VEGF elevation explored.

Elevated sVEGF had a sensitivity of 100% and a specificity of 90% for the diagnosis of POEMS syndrome, with positive and negative predictive values of 60% and 100%. sVEGF was much higher in POEMS syndrome and higher in CIDP and anti-MAG neuropathy. Multiple logistic regression showed anaemia with low iron and COPD/OSAHS were significant predictors for elevated sVEGF. There was a tendency for cancers, anti-MAG neuropathy and Waldenstrom’s disease to be predictors of elevated sVEGF, which are supported by previous studies. Other potential factors for VEGF elevation have been described, but not identified in this cohort.

We confirmed the high sensitivity and specificity of elevated VEGF for POEMS syndrome diagnosis. However, when VEGF is significantly elevated, anaemia with low iron, cancers, haematological malignancies, OSAHS, COPD and chronic inflammatory diseases should be excluded.