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**SERONEGATIVE MYASTHENIA GRAVIS-CLINICAL/
SEROLOGICAL ASPECTS**

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Acquired Myasthenia Gravis is an autoimmune channelopathy of the post-synaptic neuromuscular junction. The clinical diagnosis is supported by the detection of AChR, MuSK, or LRP4 antibodies. Despite clear autoimmune aetiology, a proportion of patients are seronegative (SNMG) and diagnostic confirmation can be challenging.

We characterised clinical and serological features in 293 suspected SNMG patients. AChR, MuSK or LRP4 antibodies were detected using radioimmunoassays (RIA) and/or cell-based assays (CBA). SNMG sera were screened for binding to primary muscle cell lines (TE671 and CN21) and inhibition of agrin-induced AChR clustering in myotube cultures (C2C12).

212 patients were negative by RIA and CBA [M:F 1:1.4 median onset age 35.5 (1–63)]. Most patients had mild disease (MGFA $\leq$ IIb)

at onset (17/17) and follow-up (70% n=61/87). Neurophysiology was positive in 65% (n=28/43). Preliminary results suggested no functional effects on agrin-induced AChR clustering and some sero-negative sera bound to primary muscle cell lines.

Myasthenia gravis patients without AChR, MuSK or LPR4 antibodies have relatively mild disease. Neurophysiology was supportive in only 65% of patients. Our evidence suggests that some of these sera do bind to novel antigen(s) on muscle cells. The next stage will be to try to define the antigen(s) using immunoprecipitation and mass spectroscopy.