# 00036
# Retrospective analysis of repetitive nerve stimulation criteria in myasthenia gravis patients

## 13/ Nerve conduction studies, quantitative and single fiber electromyography (including MUNE/MUNIX)

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**Objectives**

The objective of this retrospective study was to criticize the 3 Hz repetitive nerve stimulation (RNS) criteria for the diagnosis of myasthenia gravis (MG).

**Content**

Methods:
127 consecutive patients with clinical symptoms suggestive of MG were divided into 3 groups: D+ (n=27) = MG with at least two decrements ≥ 10% (nasal, anconeus and abductor digiti minimi muscles) or ≥ 15% (trapezius muscle); D- (n=19) = MG with jitter increase only (using single fiber electromyography: SF); No-MG (n=81) = no pathological decrement, no increase in jitter and no anti-RACh or MuSK antibodies. Of the 46 patients with MG, 23 had a generalized form (GF) and 23 an ocular form (OF).

Results:
The mean amplitude of the 1st compound muscle action potential (CMAP) after RNS was not statistically different in the three groups. In the No-MG group, for the 4 muscles studied, the 95 percentiles of the decrement between the 1st and the fourth CMAP (D1-4) and between the 1st and the 2nd CMAP (D1-2) were ≤ 5% and ≤ 4 % respectively. In the D+ group, mean D1-2 (7.6%) > mean D2-3 (6.1%) > mean D3-4 (1.5%).

Conclusion:
A decrement between 5 and 10% is doubtful and requires completing RNS or supplementing with SF, particularly if D1-2 > 4%. The upper limit of normal for the

trapezius muscle decrement can be reduced to 10%. The greatest decrement between two successive CMAPs concerns D1-2. With this approach, the sensitivity of RNS reached 96% for GF.

**Key words**

Myasthenia gravis, repetitive nerve stimulation, decrement