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Muscle

MYASTHENIC SYNDROME In a series of 40 patients with the clinical and electromyographic features of the myasthenic syndrome, studied over the past 18 years, 70 per cent had malignant neoplasms at the time of their first examinations or subsequently. The myasthenic syndrome associated with bronchogenic carcinoma is A possible cause for the syndrome was not evident among 12 patients (30 per cent) in whom no tumor was found. In patients with the myasthenic syndrome, resting muscle shows a pronounced depression of the response to a single supramaximal stimulus applied to the motor nerve. At low rates of stimulation there may be a further transient decrease of the response but, with repetitive stimulation at rates above 10 sec, there is a marked increase in the response. These patients differ from patients with myasthenia gravis, in whom there are usually only small depressions of the response of the rested muscle to a single stimulus. During repetitive stimulation, there is usually a decrease in the response at high rates as well as at low rates of stimulation. The electromyographic characteristics of the defect of neuromuscular transmission seen in the myasthenic syndrome suggest that the pathophysiology is different from that seen in myasthenia gravis and similar to that of the neuromuscular blockade produced by magnesium ion, botulinum toxin, and neomycin, all substances known to decrease the number of ACh packages released per nerve im-(Elmqvist, D., and Lambert, E. H.: Detailed Analysis of Neuromuscular Transmission in a Patient with the Myasthenic Syndrome Sometimes Associated with Bronchogenic Carcinoma, Mayo Clin. Proc. 43: 689 (Oct.) 1968.)