LEMS

Lambert- Eaton Myasthenic Syndrome (LEMS)

- Lambert- Eaton myasthenic syndrome (LEMS) is a rare autoimmune disease whose symptoms and origins are somewhat similar to those of Myasthenia Gravis (MG)
- While MG targets the Ach receptors on muscle cells, LEMS interferes with Ach release from nerve cells
- The autonomic symptoms and predominant leg weakness of LEMS help to distinguish it from MG
- LEMS is often a paraneoplastic disorder, usually small cell lung cancer

Table 3 Differentiations between myasthenia gravis and Lambert- Eaton syndrome

Feature	lambert-Eaton syndrome	Myasthenia gravis
Location of defect Component of neuromuscular junction affected	Presynaptic Voltage gated calcium channels	Postsynotic ACh R on the junctional folds
Initial presentation Progression Effect of exercise Common associated tumour	Usually limb muscle weakness From limbs to face Improves weakness Small cell lung carcinoma	Usually ocular weakness Cranio caudal Worsens weakness Thymic tumours
Deep reflexes Autonomic disturbances Autoantibody in serum	Decreased or absent Present Antibody against voltage gated calcium channels in presynaptic membrane	Intact or brisk Absent ACh R antibody
RNS test	Incremental response	Decremental response

RNS, repetitive nerve stimulation.

Diagnostic Utility of Anti- Voltage Gated Calcium Channel (VGCC) antibody :

- Direct measurement of antibodies against the calcium channels yields a definitive diagnosis of LEMS
- Antibodies to peripheral nerve P/Q- type VGCC antibodies are present in the serum of at least 85% of LEMS patients, making this a specific test