Inpatient Rehabilitation During Acute Phase Polymyositis

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Case Diagnosis

- 52-year-old male with Polymyositis.

Case Description

- Patient presented with worsening proximal limb weakness and dysphagia.
- Examination was notable for bulbar weakness, bilateral shoulder weakness, and bilateral hip weakness.
- Creatine phosphokinase (CPK) and Aldolase were elevated.
- Antibody testing, complement proteins, antinuclear antibodies, Rheumatoid Factor, Myasthenia Gravis panel, and erythrocyte sedimentation rate were negative.
- Electromyography illustrated diffuse muscle membrane irritability correlating with a mild myopathic disorder.
- He received intravenous Solumedrol for five days and was transitioned to oral prednisone, with decreasing CPK levels.
- He was admitted to Inpatient Rehabilitation, however following two days of extensive therapies he reported worsening weakness and had a significant decline in function.
- Creatine kinase (CK) levels were elevated, and patient was transferred to the Acute Care for respiratory monitoring and further treatment.
- Muscle biopsy noted an immune-mediated inflammatory myopathy, widespread MHC-1 upregulation, and no necrotizing features.

Discussion

- Polymyositis is an inflammatory myopathy that predominantly affects adults leading to proximal muscle weakness, myalgia, fatigue, absence of sensory deficits, and preservation of deep tendon reflexes.
- Diagnosis includes clinical evaluation, elevation of CK, and muscle biopsy with findings of myonecrosis, mononuclear inflammatory infiltrates, and upregulation of MHC-1.
- Treatment of myopathies is multidisciplinary and varies depending on the type of myopathy and the disease course.
- Specifically, inflammatory myopathies are treated by rest and corticosteroids, plasmapheresis, or intravenous immunoglobulin.
- Exercise therapy is recommended during a non-inflammatory state due to its tendency to induce micro injuries to the muscle fibers, which can result in further inflammation and worsening symptoms.

Figure

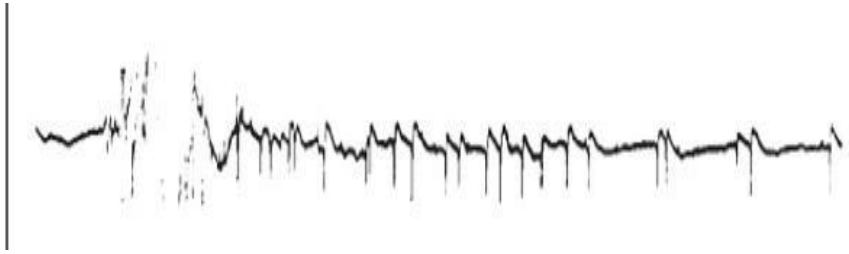

Figure: EMG illustrating diffuse muscle membrane irritability

Conclusion

- Many studies have attempted to illustrate efficacy and safety in initiating exercise training during acute myopathy.
- Although exercise interventions, specifically aerobic endurance training, have shown positive effect on strength, function, and endurance in noninflammatory myopathies, it is important to minimize exercise during the acute phase of inflammatory myopathies due to its risk of greater muscle damage.

References

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