Abstract

Most fatigable ptosis secondary to Myasthenia Gravis are benign in nature and can be monitored and treated in the outpatient setting. The goal of presenting this case is to bring attention to a small subset of medication induced myasthenia gravis cases that should be managed aggressively inpatient due increased mortality.

Pembrolizumab is an immune checkpoint inhibitor (ICI) used in the treatment of several types of cancer. While it has been shown to be effective in improving survival rates in cancer patients, it can also cause immune-related adverse events (irAEs) that affect various organs including the neuromuscular system. There is a plethora of irAEs, but being aware of their existence can aid in early diagnosis and treatment to decrease mortality. Here we present a case of a patient who developed myasthenia gravis (MG) and encephalopathy following treatment with pembrolizumab. Patient presented with ptosis that showed significant improvement with the ice pack, as well as intermittent diplopia, and mild shortness of breath. The patient was urgently referred to the emergency room. The patient was MG antibody positive, and steroids were initiated inpatient. The hospital course was complicated by change in mental status despite essentially normal neuroimaging. The patient and family elected not to undergo aggressive measures as hospice care was pursued and the patient subsequently passed away.

Studies as recent as 2023 have investigated and found benefit in the use of neuromuscular antibodies as a screening modality for irAE. Providers are likely to see this rare complication more frequently as the use of ICI for cancer treatment increases. Therefore, ophthalmologists should be aware as studies have shown decreased mortality with early identification and aggressive treatment.