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Nivolumab Induced Myasthenia Gravis



Oak Hill Hospital

TOGETHER, PERFORMING AT A HIGHER STANDARD®

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Introduction

The immune checkpoint inhibitors, including anti-programmed cell death-1 protein (PD1) monoclonal antibodies nivolumab (Nivo) has been used to treat advanced malignant melanoma and several malignancies including recurrent or metastatic squamous cell carcinoma of the head and neck (SCCHN), Metastatic Non-Small Cell Lung Cancer, advanced RCC. PD1 inhibitor

Despite the clinical efficacy of Nivolumab, autoimmune related side effects including myasthenia Gravis has been reported, The underlying mechanism of MG is still unclear. A recent case report introduced myasthenia gravis in a patient with RCC. We are reporting the case of a patient with no pre-existing myasthenia gravis (MG) in whom nivolumab was administered and developed MG related side effect complication

Background

The 61 year-old male with active melanoma undergoing treatment with Nivolumab developed myasthenia-like symptoms following his third round of treatment. The immunotherapy was immediately discontinued and started on steroids by his oncologist. The patient's symptoms did not improve and he was subsequently admitted to the hospital where his condition further deteriorated. He was treated with IV solumedrol, pyridostigmine, and IVIG. The patient still did not respond to these treatment and was treated with plasmapheresis.

Imaging



Discussion

Opdivo is an anti-monoclonal antibody, that targets the anti PD-1 receptor, which creates an anti tumor response. It has been known to be efficacious against melanoma, and other cancers such as recurrent or metastatic squamous cell carcinoma of the head and neck (SCCHN), Metastatic Non-Small Cell Lung Cancer, advanced RCC. Common side effects that are known from this drug are respiratory (17.3%), musculoskeletal (15.2%), neurological (11.5%), ocular (5.7%), cardiac(3.6%), and hematological (.7%).

Conclusions

This case illustrates the importance of early recognition and appropriate management of immune related adverse events with immunotherapy. This patient had early recognition and was given proper treatment, however still expired as a result of complications secondary to Nivolumab-induced myasthenia gravis.

References

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