



# A Unique Combination Unilateral Bell's Palsy, Bilateral Anterior Uveitis, and Rash After Checkpoint Inhibitor Treatment of Metastatic Melanoma

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## LEARNING OBJECTIVE

Recognize immune checkpoint inhibitor toxicity.

## CLINICAL PRESENTATION

### Symptoms

- Patient is a 62-year-old man with stage IV BRAF+ metastatic melanoma to the brain and lungs presented with a 2-day history of right-sided facial weakness, dysarthria, bilateral purulent eye discharge, bilateral leg rash, and fevers.
- The patient had been receiving immune checkpoint inhibitors (ICI) with Nivolumab and Ipilimumab within 3 months of presentation.

### Physical Examination

- Neurological exam: right-sided facial droop, decreased taste on the left rear tongue, and dysarthria.
- Skin: pitting edema through both his calves, more significant on his left leg, associated with significant erythema, warmth, and tenderness.
- Ophthalmic exam: poor visual acuity, irregular and sluggish pupils, corneal dusting, and keratic precipitates which were consistent with bilateral anterior uveitis.

### Imaging/Labs

- Brain MRI - hyperenhancement of bilateral facial nerves and geniculate ganglia, which was consistent with bilateral facial nerve palsy. No evidence of new brain metastasis.
- Ultrasound - negative of deep venous thrombosis.
- Labs - infectious work-up for uveitis was negative.
- CSF cytology - no evidence of new brain metastases.

### Management

- His constellation of symptoms was consistent with ICI toxicity, thus, he was started on high dose glucocorticoids for his facial nerve palsy and steroid eye drops for his uveitis with significant improvement in his symptoms. By the fifth day of his hospitalization, his neurologic and ocular symptoms had started to resolve (Figures 1-2).

## IMAGING



Fig. 1: Residual Bell's palsy on hospital day 5



Fig. 2: Residual rash on hospital day 5

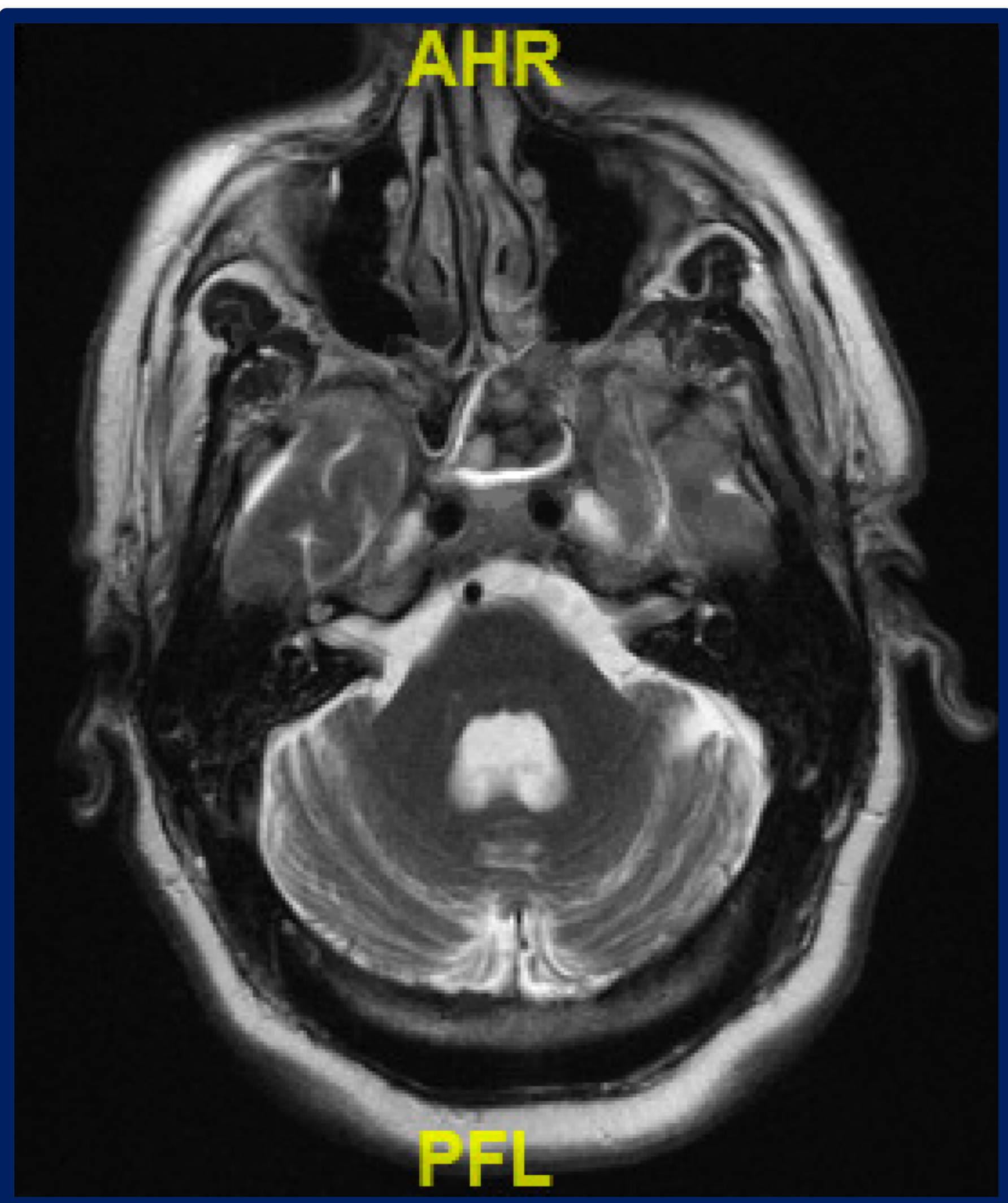


Fig. 3: Brain MRI with hyperenhancement of bilateral facial nerves and geniculate ganglia on hospital day 2

## DISCUSSION

### Immune Checkpoint Inhibitors

- Ipilimumab, an anti-CTLA-4 agent, and Nivolumab, an anti-PD-1 agent, are both associated with immune-related adverse events (irAE).
- These irAE typically occur within 3 months of starting therapy, and more common with combination therapy versus monotherapy with either class.<sup>1</sup>

### Adverse Effects

- Most commonly, these irAE include diarrhea, colitis, pruritus, rash, and endocrinopathies.
- While neurologic and ocular toxicities are associated with checkpoint inhibitors, both are exceedingly uncommon and occur in <1% of cases on their own.<sup>1</sup>
- Our patient had a unique combination of symptoms from these agents which have only rarely been described in the literature. Two cases describing these symptoms together had varying timelines and combinations of symptoms.<sup>2,3</sup>
- Past cases involving either uveitis or Bell's palsy are usually after the administration of Ipilimumab, not Nivolumab.
- In the cases where the patient was on both Ipilimumab and Nivolumab, the irAE resolve and do not return with a steroid course and discontinuation of Ipilimumab.

### Treatment

- Peripheral neuropathy involving cranial nerves is treated with prednisone. Anterior uveitis is treated with topical steroids, systemic steroids, and cycloplegic agents.
- ICI may be resumed once systemic steroids are tapered down and symptoms improve.

### Conclusion

- ICI may present with neurologic and ocular irAE months after treatment.
- ICI may be continued after irAE depending on the severity of symptoms and response to treatment.
- Physicians taking care of patients undergoing ICI should be aware of the potential irAE to quickly identify unique constellation of symptoms and treat them appropriately.

## REFERENCES

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