Secondary Adrenal Insufficiency Resulting from Superior Laryngeal Nerve Block

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Key Takeaway:

Although SLN blocks are generally safe, discretion is advised for patients who are treated with recurrent injections.

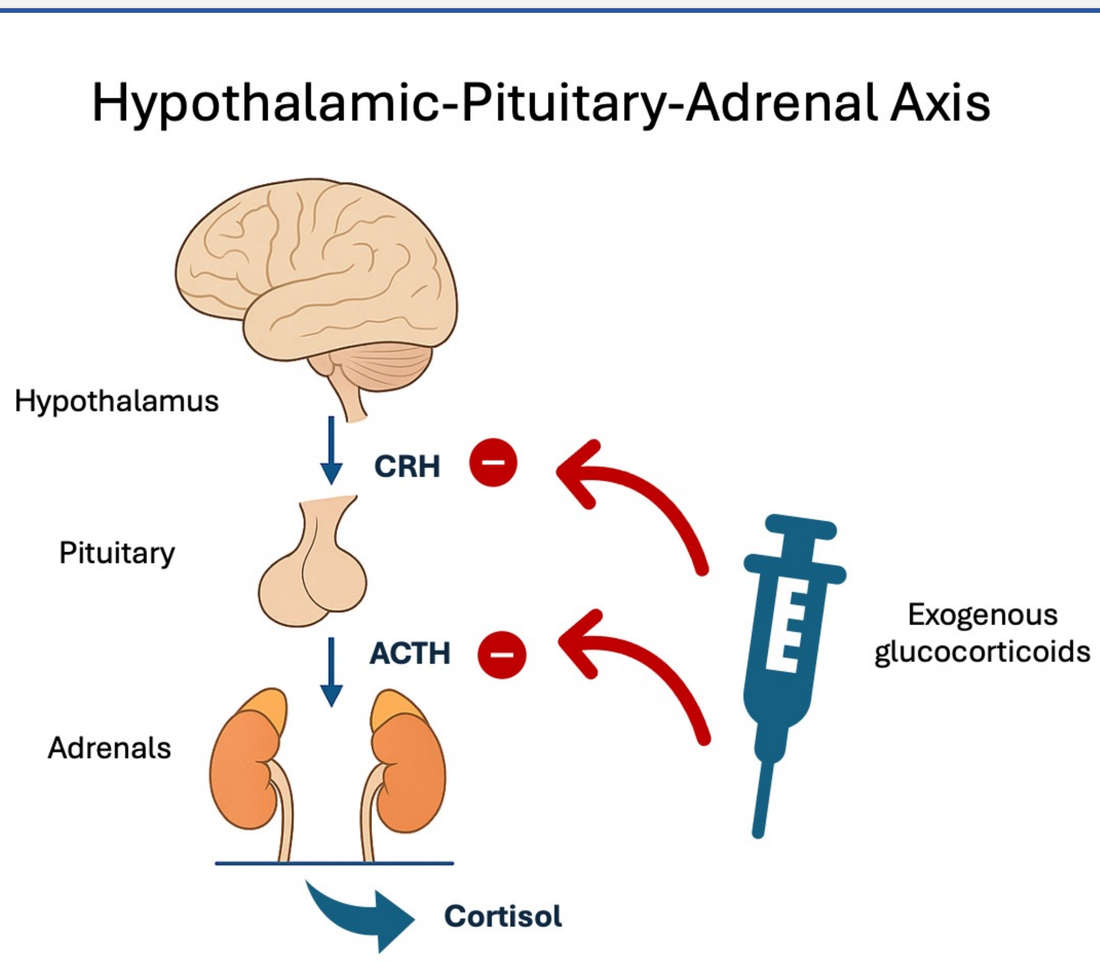

Figure 1 demonstrates that in secondary adrenal insufficiency, exogenous glucocorticoids exhibit negative feedback on the release of corticotropin-releasing hormone (CRH) and adrenocorticotropic hormone (ACTH), leading to Hypothalamic-Pituitary-Adrenal (HPA) axis suppression.

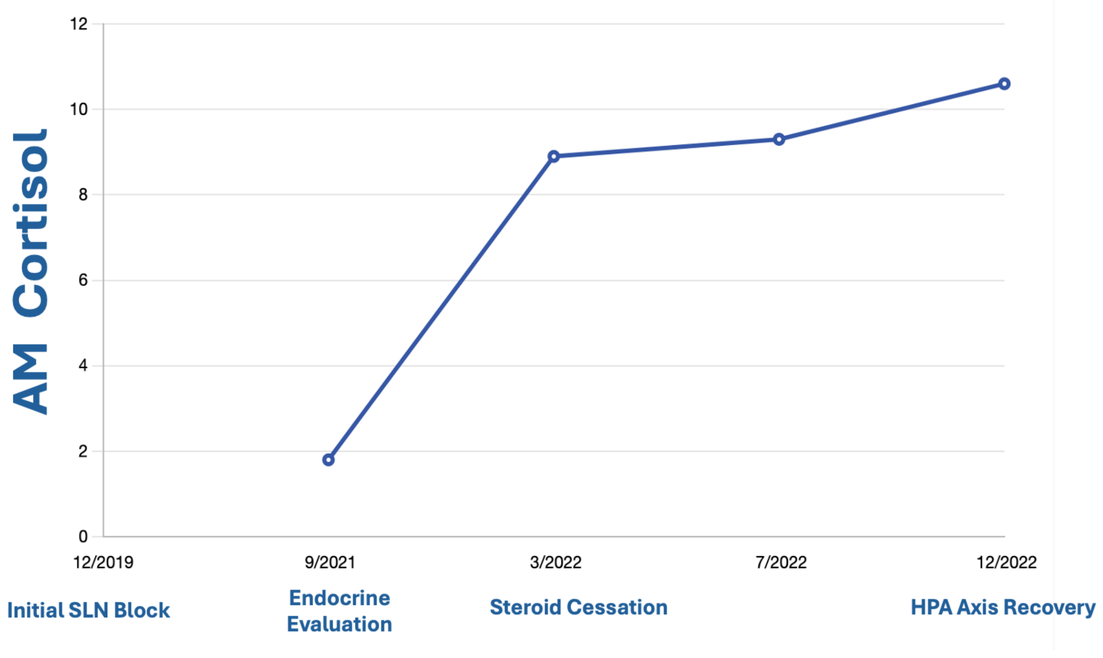

Figure 2 demonstrates the change in AM Cortisol over time. The patient's AM Cortisol was found to be low at 1.8mcg/dL on initial Endocrine evaluation. Following identification and discontinuation of the steroid blocks, AM Cortisol recovered appropriately to 10.6 mcg/dL.

Introduction

Superior laryngeal nerve (SLN) blocks are safe and efficacious treatments for neurogenic cough.[1-3] Though generally well tolerated, we present the case of secondary adrenal insufficiency resulting from serial SLN blocks, a previously undescribed complication.

Case

A 67-year-old male with neurogenic cough was treated with serial SLN blocks using a 50:50 solution of local anesthetic and long-acting particulate corticosteroid (40 mg triamcinolone per injection). He noted symptomatic improvement with a duration of benefit of one month and underwent alternating laterality SLN blocks every 1-2 months. After one year, he began to develop symptoms of fatigue, nausea, muscle aches and weakness, skin changes, and heat intolerance.

Results

On Endocrine workup, the patient was found to have low morning cortisol (< 10 mcg/dL) with undetectable adrenocorticotropic hormone consistent with secondary adrenal insufficiency. Corticosteroid SLN blocks were discontinued. The patient was started on physiologic hydrocortisone replacement and weaned successfully after cosyntropin stimulation test demonstrated recovery of the HPA axis.

Conclusion

Although SLN blocks are generally safe, discretion is advised for patients who are treated with recurrent injections. Patients should be monitored for systemic side effects of secondary adrenal insufficiency, especially if blocks are performed over an extended period of time.

Disclosure

Contact

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