

ADRENAL CRISIS AFTER COVID-19 VACCINATION IN PATIENT WITH HYPOPITUITARISM

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Adrenal crisis (AC) is acute life-threatening condition that can occur in patients with adrenal insufficiency (AI) after exposure to infection, surgery, strenuous physical or psychological stress.¹ Our objective is to present a novel case of AC precipitated by COVID-19 vaccination. A 74-year-old male with medical history significant for prolactinoma with surgical resection and subsequent hypopituitarism on replacement therapy (compliant with medications) presented with altered mental status and fever. Two days before presentation, the patient received the second dose of COVID-19 vaccine at 1pm and within hours he experienced lethargy and confusion. The next day, he was unable to converse, was more somnolent, and sleeping for more than 24 hours. EMS was called, and the patient was found to have blood glucose of 20 mg/dL and myosis and was treated with IV dextrose and naloxone without improvement in mentation. On arrival to ED he was only responsive to painful stimuli, febrile to 103.5 F, tachycardic to 105 beats/minute and blood pressure was 145/84 mmHg which subsequently decreased to 107/71 mmHg. Workup revealed serum blood glucose of 143 mg/dl, random cortisol level of 1.91 µg/dl, TSH of 0.006 UIU/mL and free T4 1.90 ng/dL. Urinary toxicology screen was negative and blood alcohol level was undetectable. Head computer tomography (CT), CT angiography and lumbar puncture with cerebrospinal fluid analysis were negative for central nervous system (CNS) pathology. As structural and infection CNS causes were excluded stress dose of steroids was started. After 24h of stress dose of hydrocortisone 50 mg every 6 hours patient had significant improvement in mental status. Patient was diagnosed with AC precipitated by immunization with COVID-19 vaccine. This is a first case of AC secondary to COVID-19 vaccine. Better understanding and guidance for prevention of AC prior to COVID-19 vaccination are needed for safe immunization of patients with hypopituitarism.

References:

1. Dineen R, Thompspon C, Sherlock M. Adrenal crisis: prevention and management in adult patient. The Adv Endocrinol Metab. 2019;10:1-12.