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Endocrinology Second Opinion - Center of excellence Written Report

Date: 2022-08-08

Patient: Jane Doe

Discussion:

It is not clear from the information submitted that a diagnosis of pituitary ACTH hyper secretion known as Cushing's Disease has been established.

Biochemical testing is used to establish the diagnosis of Cushing Syndrome (CS). At least two first-line tests should be diagnostically abnormal before the diagnosis is confirmed. Initial tests include the overnight low-dose dexamethasone suppression test (LDST), 24-hour urine free cortisol (UFC), and late-night (LN) salivary cortisol. All three tests have similar diagnostic utility, but the LDST or LN salivary cortisol tests are more convenient. The 24-hour UFC and LN salivary cortisol tests should be performed at least twice to ensure reproducibility of results. Measurement of random serum cortisol is not very sensitive nor specific for the diagnosis of CS. This is because of the diurnal and pulsatile variation of cortisol secretion.

Recommendations:

If CS has been confirmed biochemically, further testing is required to distinguish ACTH-dependent or -independent causes. The first step is to measure plasma ACTH on two separate occasions. With adrenal (ACTH-independent) CS, plasma ACTH is usually less than 5 pg/mL (1.1 pmol/L), whereas values greater than 20 pg/mL (4.4 pmol/L) are typically seen with ACTH-dependent causes.

If no pituitary tumor or a tumor less than 6 mm is visualized on MRI, an 8-mg dexamethasone suppression test is used to differentiate Cushing disease from an ectopic source of ACTH. Ectopic ACTH production from a nonpituitary tumor (most often lung, pancreas, or thymus carcinomas) is very uncommon.

Questions:

CS must be differentiated from other disorders and clinical states that are associated with physiologic hypercortisolism (pseudo-Cushing syndrome). Causes of pseudo-Cushing syndrome include severe obesity, polycystic ovary syndrome, pregnancy, anorexia nervosa, depression, alcoholism, and extreme physical stress, as in the setting of infection.

You mention a negative MRI of both the pituitary gland and the adrenal glands. You also mention a history of Poly Cystic Ovary Syndrome (PCOS) and inordinate weight gain. Please review the above clinical states to assure that you are not suffering from pseudo- Cushing Syndrome.

You might need to revisit with an academic Endocrinologist who will help you firmly exclude or establish the diagnosis of Cushing's disease.

References:

Nieman LK, Biller BMK, Findling JW, et al. The diagnosis of Cushing's syndrome: an Endocrine Society clinical practice guideline. J Clin Endocrinol Metab. 2008 May;93(5):1526-40.

Electronically Signed by:, MD on 08/08/2022 04:03:00 AM

Board Certified:

Endocrinology, Diabetes and Metabolism and Internal Medicine

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