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Cushing syndrome due to adrenal tumor

Cushing syndrome due to adrenal tumor is a form of Cushing syndrome. It occurs when a tumor of the adrenal gland releases excess amounts of the hormone cortisol.

Causes

Cushing syndrome is a disorder that occurs when your body has a higher than normal level of the hormone cortisol. This hormone is made in the adrenal glands. Too much cortisol can be due to various problems. One such problem is a tumor on one of the adrenal glands. Adrenal tumors release cortisol.

Adrenal tumors are rare. They can be noncancerous (benign) or cancerous (malignant).

Noncancerous tumors that can cause Cushing syndrome include:

- Adrenal adenomas, a common tumor that rarely makes excess cortisol
- Macronodular hyperplasia, which causes the adrenal glands to enlarge and make excess cortisol

Cancerous tumors that may cause Cushing syndrome include an adrenal carcinoma. This is a rare tumor, but it usually makes excess cortisol.

Symptoms

Most people with Cushing syndrome have:

- Round, red, full face (moon face)
- Slow growth rate in children
- Weight gain with fat accumulation on the trunk, but fat loss from the arms, legs, and buttocks (central obesity)

Skin changes that are often seen:

- Skin infections
- Purple stretch marks (1/2 inch or 1 centimeter or more wide), called striae, on the skin of the abdomen, thighs, upper arms, and breasts
- Thin skin with easy bruising

Muscle and bone changes include:

- Backache, which occurs with routine activities
- Bone pain or tenderness
- Collection of fat between the shoulders and above the collar bone
- Rib and spine fractures caused by thinning of the bones
- Weak muscles, especially of the hips and shoulders

Body-wide (systemic) changes include:

- Type 2 diabetes mellitus
- High blood pressure
- Increased cholesterol and triglycerides

Women often have:

- Excess hair growth on the face, neck, chest, abdomen, and thighs (more common than in other types of Cushing syndrome)
- Periods that become irregular or stop

Men may have:

- Decreased or no desire for sex (low libido)
- Erection problems

Other symptoms that may occur include:

- Mental changes, such as depression, anxiety, or changes in behavior
- Fatigue
- Headache
- Increased thirst and urination

Exams and Tests

Your health care provider will perform a physical exam and ask about your symptoms.

Tests to confirm Cushing syndrome:

- 24-hour urine sample to measure cortisol and creatinine levels
- Blood tests to check ACTH (adrenocorticotropic hormone), cortisol, and potassium levels
- Dexamethasone suppression test
- Blood cortisol levels
- Blood DHEA level
- Saliva cortisol level

Tests to determine cause or complications include:

- Abdominal CT -- usually with and without IV contrast
- ACTH
- Bone mineral density
- Cholesterol
- Fasting glucose

In some cases, you need a special test called adrenal vein sampling to determine which adrenal gland is making too much cortisol and causing Cushing syndrome.

Treatment

Surgery is done to remove the adrenal tumor. Often, the entire adrenal gland is removed.

Glucocorticoid replacement treatment is usually needed until the other adrenal gland recovers from surgery. You may need this treatment for 3 to 12 months.

If surgery is not possible, such as in cases of adrenal cancer that has spread (metastasis), medicines can be used to stop the release of cortisol.

Outlook (Prognosis)

People with an adrenal tumor who have surgery have an excellent outlook. For adrenal cancer, surgery is sometimes not possible. When surgery is performed, it does not always cure the cancer.

Possible Complications

Cancerous adrenal tumors can spread to the liver or lungs.

When to Contact a Medical Professional

Contact your provider if you develop any symptoms of Cushing syndrome.

Prevention

Appropriate treatment of adrenal tumors may reduce the risk of complications in some people with adrenal tumor-related Cushing syndrome.

Alternative Names

Adrenal tumor - Cushing syndrome; Cushing's syndrome due to adrenal tumor

References

Asban A, Patel AJ, Reddy S, Wang T, Balentine CJ, Chen H. Cancer of the endocrine system. In: Niederhuber JE, Armitage JO, Kastan MB, Doroshow JH, Tepper JE, eds. *Abeloff's Clinical Oncology*. 6th ed. Philadelphia, PA: Elsevier; 2020:chap 68.

Fragaso MCBV, Berthon A, Bertherat J. Adrenocorticotrophic hormone-independent Cushing syndrome. In: Robertson RP, ed. *DeGroot's Endocrinology*. 8th ed. Philadelphia, PA: Elsevier; 2023:chap 97.

Newell-Price JDC, Auchus RJ. The adrenal cortex. In: Melmed S, Auchus RJ, Goldfine AB, Koenig RJ, Rosen CJ, eds. *Williams Textbook of Endocrinology*. 14th ed. Philadelphia, PA: Elsevier; 2020:chap 15.

Nieman LK, Biller BM, Findling JW, et al. Treatment of Cushing's syndrome: an Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab*. 2015;100(8):2807-2831. PMID: 26222757
pubmed.ncbi.nlm.nih.gov/26222757/ [https://pubmed.ncbi.nlm.nih.gov/26222757/].

Review Date 5/12/2023

Updated by: Sandeep K. Dhaliwal, MD, board-certified in Diabetes, Endocrinology, and Metabolism, Springfield, VA. Also reviewed by David C. Dugdale, MD, Medical Director, Brenda Conaway, Editorial Director, and the A.D.A.M. Editorial team.

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Health Content
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06/01/2028

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