

A Short Communication on Cushing's Disease

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CUSHING'S DISEASE

Cushing's disease is a rare and serious health condition caused by a pituitary tumor. It produces excess steroid hormone cortisol in the blood level secrets by ACTH (Adrenocorticotrophic Hormone). Adrenocorticotrophic Hormone is a hormone produced by pituitary gland. Adrenocorticotrophic Hormone stimulates adrenal gland to produce cortisol which is also called as stress hormone.

In 1924, Soviet neurologist Nikolai Itsenko reported pituitary adenoma in two patients. The excessive adrenocorticotrophic hormone secretion leads to the excessive production of cortisol by adrenal glands. Considering this, the name of Itsenko was added to the title in some East European and Asian countries, and the disease is called Itsenko-Kushing disease.

Cushing's disease is not same as Cushing's syndrome. Cushing's syndrome refers to general state and characterized by excessive levels of cortisol in the blood. But, symptoms of Cushing's disease and Cushing's syndrome are same.

Cushing's disease mostly affected by adults between 20 and 50 years of age. Women are affected more than men (70 percent of cases observed in women).

Cortisol is normally released during the stressful conditions or situations. The other functions, including:

- Controlling use of carbohydrates, fats, and proteins of the body
- Reduces immune system's response to inflammation (swelling)
- Regulates blood pressure and water balance

The symptoms of Cushing's disease includes physical characteristics of body

- Round face (also called as moon faces)
- Fat on back of the neck (also-called as buffalo hump)
- Easy bruising of the skin
- Stretch marks on the abdomen (abdominal striae) in Purplish
- Gaining of weight, mostly observed at abdominal region
- Red cheeks (plethora)

- Hair growth on face, neck, chest, abdomen and thighs
- Weakness and fatigue; wasting of muscles, most noticeably in the upper thighs.
- Difficulty in getting up from a chair.
- Menstrual disorders
- Decreased fertility and/or sex drive
- High blood pressure which is often difficult to treat
- Diabetes mellitus, often severe
- Mood swings and behaviour disorders; some patients may have psychiatric disorders that requires hospitalization
- Vision loss
- Decreased libido
- Decreased fertility
- Erectile dysfunction
- Depression
- Anxiety
- Irritability
- Cognitive difficulties
- Impaired growth in children
- Bone loss (osteoporosis)
- Pigmentation on skin

Cushing's disease may be difficult to recognize in the early stage. Sometimes hormone levels will fluctuate which is called as cyclic or periodic of Cushing's disease. In pregnant women, the pregnancy may worsen the symptoms of Cushing's disease.

To diagnose the disease following tests need to be done

- Hormonal testing
- MRI (Magnetic Resonance Imaging) scan
- Inferior petrosal sinus sampling
- Dexamethasone suppression test (If IPSS test not available)

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- Urinary free cortisol test
- Late night (midnight) salivary cortisol test
- Treatment for Cushing's disease
- Medication

- Surgery
- Radiation therapy
- Other treatment options

Replacement of cortisol with hydrocortisone or prednisone after surgery