

SARCOIDOSIS AND THE ENDOCRINE SYSTEM

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Hypothalamic-Pituitary Involvement

Hypothalamic-pituitary sarcoidosis occurs in less than 1 in 20 people with sarcoidosis.

Granulomas can form in the brain at the hypothalamus and pituitary gland. These glands are involved in your body's hormone system. The hypothalamus is a control centre that sends signals to the pituitary gland to release hormones that control growth, temperature, libido, periods, erections, metabolic rate, blood pressure, and other vital functions.

Symptoms:

- headaches and changes in vision
- changes in menstrual cycles for women,
- problems with sexual interest and function
- changes in your energy and/or weight
- increase in thirst and urination

Steroid treatment for sarcoidosis can also affect hypothalamus and pituitary function.

Diagnosis:

This often involves a combination of blood tests, imaging studies like MRI scans, and rarely a biopsy.

Treatment

Treatment focuses on medications to treat sarcoidosis and replacing the hormones that your body is not producing.

Adrenal gland involvement

The adrenal glands sit on top of each kidney and produce cortisol (which helps your body respond to physical stress) and aldosterone (which helps control blood pressure).

Steroid treatment for sarcoidosis can affect your body's own steroid production. This can influence how much cortisol and aldosterone your adrenal glands make.

Steroids are very important to control the sarcoidosis so your doctors will want to find the lowest possible dose to both control the disease but minimize the effect on your adrenal glands.

Rarely sarcoidosis can affect the adrenal glands directly, with granulomas disrupting the normal functioning of the gland, leading to adrenal insufficiency or secondary adrenal failure.

Symptoms:

- Fatigue
- Weight loss
- Low blood pressure (which can cause dizziness or fainting)

Adrenal insufficiency can be difficult to recognise and cause you to be unwell at short notice. You should carry a steroid alert card and inform healthcare professionals of your steroid use.

Thyroid gland involvement

Sarcoidosis can sometimes directly involve the thyroid gland in your neck which makes hormones that control your metabolism. These hormones affect processes like heart rate, body temperature, and weight.

In sarcoidosis, granulomas can form and disrupt the normal functioning of the thyroid leading to either hypothyroidism (low thyroid function) or hyperthyroidism (high thyroid function).

Granulomas in the thyroid may need investigating to distinguish them from other lumps in the thyroid – this is usually done with an ultrasound scan but sometimes with a needle biopsy.

Pancreas involvement

Very rarely, sarcoidosis may involve the pancreas either because granulomas in the pancreas, or lymph nodes nearby, affect its function. Even more rarely, the pancreas' ability to make insulin can be damaged, leading to diabetes mellitus. The steroids used to control sarcoidosis can irritate the pancreas, which can damage both its digestive function and its insulin production. They can also contribute to weight gain, increasing the demands on the pancreas which can lead to diabetes mellitus.