



Deutsche Gesellschaft für Endokrinologie
Hormone und Stoffwechsel

MEDIA RELEASE

Conn's adenoma: surgical treatment of hypertension Adrenal glands experts discuss diagnostic imaging

Mainz (Germany), June 2018 – Hypertension is not always a result of unfavorable lifestyle choices. For some hypertension patient, it is an adrenal gland tumor that causes stress in blood vessels. Many of these patients can be treated surgically with permanent positive outcomes. Innovative imaging techniques can improve treatments of hormone-related hypertension, also known as Conn's syndrome, as the Deutsche Gesellschaft für Endokrinologie (German Society of Endocrinology / DGE) pointed out during the run-up to the 18th International Adrenal Conference (Adrenal 2018) in Munich. The conference will bring together international hormone experts to discuss the latest diagnostic approaches.

Between 20 and 30 million people in Germany suffer from hypertension. Experts expect that in 4 to 12 percent of these cases, the cause for the high blood pressure is hormone-related. Hormone-related causes include Conn's adenoma, a tumor in the cortex of the adrenal gland that results in an overproduction of aldosterone. This hormone regulates the body's sodium and water retention or loss. "When the aldosterone levels rise too high, the body retains too much sodium, which in turn causes hypertension," says Professor Dr. med. Martin Fassnacht, Director of endocrinology and diabetology at the Würzburg University Hospital and co-initiator of the conference in Munich. Conn's adenoma can be surgically removed. "For many patients this means their hypertension will be cured," says Professor Dr. med. Stefanie Hahner of the Würzburg University Hospital. However, the necessary surgical procedure – known as adrenalectomy – is seldom performed, as Prof. Hahner explains. The expert says that Conn's syndrome is only rarely recognized as root cause of hypertension. For a detailed diagnosis, doctors would need to examine the blood from the adrenal veins with a catheter, a very complex procedure only performed in very few specialized centers in Germany. A simpler alternative would be a CT scan. According to an international study that will be presented at the conference in Munich, CT scans are less reliable than selective blood samples. "The CT scan only shows us the existence of an adrenal tumor but not

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Prof. Dr. med. Matthias M. Weber
(Mediensprecher)
Dagmar Arnold
Postfach 30 11 20
D-70451 Stuttgart
Telefon: 0711 8931-380
Telefax: 0711 8931-167
arnold@medizinkommunikation.org
www.endokrinologie.net

whether it actually produces aldosterone,” Prof. Hahner says. The study revealed that adrenalectomies performed after CT diagnoses led significantly less frequently to normalized hormone levels.

Another diagnostic method that can both reveal the existence of a tumor and indicate its hormone production is positron emission tomography (PET). PET measures radiation emitted by a slightly radioactive tracer substance that is injected into the patient's vein. Over the past few years, Dr. Andreas Schirbel, radiochemist at the Würzburg University Hospital's PET Center has developed several tracers with his team. These tracers latch onto an enzyme in the tumor cells and can thus be used to indicate whether an adenoma is present and which kidney needs to be removed.

In the vast majority of hypertension cases doctors do not find an underlying cause that could be removed through treatment. These patients need to take medication to lower their blood pressure throughout their lives in order to mitigate the risks of strokes, cardiac infarctions, and other cardiovascular diseases. Other helpful measures are changes in lifestyle, including increased physical activity, a healthy diet, and giving up smoking. The challenge remains to identify those patients whose hypertension is hormone-related. “We hope that in the next few years, our PET tracer will be introduced in clinics and hospitals so that it contribute to more frequent diagnoses and successful treatments of Conn's syndrome,” Dr. Schirbel says.

References:

Patent: Allolio B, Hahner S, Hartmann R, Schirbel A, Zimmer C. PET radiopharmaceuticals for differential diagnosis between bilateral and unilateral conditions of primary aldosteronism. PCT/EP2011/059135; filed 10.4.2013

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Announcement:

The 18th Adrenal Cortex Conference (June 25th through 27th 2018)

Venue: Conference Center Munich, Lazarettstraße 33, 80636 Munich, Germany

More information: <https://sites.google.com/site/adrenalcortexconference/>

Endocrinology is the study of hormones, the body's metabolism, and related diseases. Hormones are secreted by endocrinal glands, including the thyroid and pituitary glands, as well as certain testicular and ovarian cells. They are secreted 'endocrinally', i.e. inside the body into the blood stream. In contrast, exocrine glands like the salivary and sudoriferous glands excrete secretions.

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