Experts recommend tumor removal as first-line treatment for acromegaly

30 October 2014

The Endocrine Society today issued a Clinical Practice Guideline (CPG) for the diagnosis and treatment of acromegaly, a rare condition caused by excess growth hormone in the blood.

The CPG, entitled "Acromegaly: An Endocrine Society Clinical Practice Guideline," appeared in the November 2014 issue of the *Journal of Clinical Endocrinology and Metabolism* (*JCEM*), a publication of the Endocrine Society.

Acromegaly is usually caused by a non-cancerous tumor in the pituitary gland. The tumor manufactures too much growth hormone and spurs the body to overproduce insulin-like growth factor-1 (IGF-1), a hormone made in the liver that also promotes growth. Due to the overabundance of growth-promoting hormones, a person with acromegaly may have large hands and feet, thick lips, coarse facial features, a jutting forehead and jaw, and widely spaced teeth. In addition, acromegaly predisposes people to a number of medical conditions, including diabetes, hypertension, heart disease and sleep apnea.

The condition is quite rare, with an estimated three cases diagnosed out of a million people each year. Acromegaly most often occurs in middle-aged men and women. In children, excess growth hormone causes gigantism.

"Overabundance of growth hormone and IGF-1 can reduce life span and lower quality of life for people with acromegaly, so it is crucial to identify a treatment plan to control hormone levels and the tumor itself," said Laurence Katznelson, MD, of the Stanford University School of Medicine in Stanford, CA, and chair of the task force that authored the guideline. "The condition often requires individualized treatment because signs and symptoms can vary from patient to patient."

In the CPG, the Endocrine Society recommends that surgery to remove tumors from the pituitary gland be considered as the primary therapy for most patients. Successful surgery has the advantage of immediately lowering growth hormone levels. Five-year disease recurrence rates are small, ranging from 2 percent to 8 percent. This approach also provides an opportunity to examine the tumor sample to learn more about the individual's condition.

When acromegaly symptoms persist after surgery, the Society recommends pursuing medical therapy. Some patients may require radiation therapy if there is tumor tissue remaining after surgery or in cases where medication is ineffective or causes side effects.

Other recommendations from the CPG include:

- IGF-1 levels should be measured in people who have facial features or large extremities associated with acromegaly.
- When a person has a mass on the pituitary gland, IGF-1 levels should be measured to rule out acromegaly.
- Physicians should not rely on random growth hormone measurements to diagnose the condition.
- An acromegaly diagnosis should be confirmed by testing whether the body continues to produce growth hormone after the patient drinks sugar water for an oral glucose tolerance test.
- People with acromegaly should be assessed to see whether the pituitary tumor has caused damage and created a deficiency of other pituitary hormones, a condition called hypopituitarism.
- After surgery to remove the pituitary tumor, an imaging study (usually an MRI scan) to visualize any residual tumor tissue should be conducted at least 12 weeks later.
- Patients receiving radiation therapy should undergo annual growth hormone and IGF-1 reassessments after medication withdrawal.

- People who develop gigantism as children also should be treated using surgery as the primary therapy, and then using medication or radiation treatment based on the individual's condition and response to treatment.

More information: The Hormone Health Network offers resources on acromegaly at www.hormone.org/questions-and- … wers/2012/acromegaly

Provided by The Endocrine Society