PITUITARY GLAND

Effect of lanreotide on postoperative health outcomes in patients with acromegaly

Treatment with the somatostatin analog lanreotide before transsphenoidal surgery improves surgical cure rates in patients with acromegaly as a result of growth-hormone-secreting pituitary macroadenomas, but has no effect on surgical complications or duration of hospitalization, say researchers of a study published in the *European Journal of Endocrinology*.

> “...preoperative treatment with lanreotide could improve surgical cure rates of patients with acromegaly...”

Transsphenoidal surgery for the selective removal of pituitary adenomas is currently the first-line treatment for most patients with acromegaly. Success rates for the surgery of macroadenomas, however, are lower than those for microadenomas. Lanreotide, a synthetic somatostatin analog that inhibits the release of growth hormone, TSH, insulin and glucagon, could potentially reduce the size of growth-hormone-secreting pituitary adenomas.

Previous small, retrospective studies have addressed preoperative treatment with somatostatin analogs and subsequent surgical cure rates, but the results were conflicting. Mao *et al.*, therefore, conducted a prospective, randomized study to investigate whether preoperative treatment with lanreotide could improve surgical cure rates of patients with acromegaly as a result of a macroadenoma.

The researchers randomly assigned 98 patients to either a 4-month preoperative treatment with lanreotide (starting dose 30 mg every 2 weeks, titrated to a weekly dose of 30 mg after 8 weeks if the mean growth hormone level was >2.5 μg/l) or to transsphenoidal surgery alone. Surgical cure rates were determined 4 months after the operation primarily by measuring fasting levels of insulin-like growth factor 1.

Surgical cure was established in 24 of 49 patients pretreated with lanreotide compared with 9 of 49 patients who were treated with surgery alone. The occurrence of surgical morbidity was similar between groups, as was the postoperative hospital stay (4.5 ± 1.6 days in patients treated with lanreotide versus 4.8 ± 1.9 days in patients treated with surgery alone).

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Original article Mao, Z. G. *et al.* Preoperative lanreotide treatment in acromegalic patients with macroadenomas increases short-term postoperative cure rates: a prospective, randomized trial. *Eur. J. Endocrinol.* doi:10.1530/eje-09-090