# Somatotroph adenoma outcome

Somatotroph pituitary neuroendocrine tumor, (GH producing adenomas, somatotropinomas) is an insidious disease with persistent hypersecretion of growth hormone and insulin-like growth factor 1, causing increased morbidity and mortality.

Growth hormone-secreting functioning pituitary neuroendocrine tumor (GHPA) is a rare, chronic, systemic disease that is associated with premature death and significant morbidity [1].

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Cavernous sinus (CS) invasion is an unfavorable factor hindering remission of Growth hormone secreting pituitary neuroendocrine tumor.

The Standardized mortality ratio (the ratio of observed mortality in the acromegalic population to expected mortality in the general population) ranged from 1.2 to 3.3. If left untreated, patients with acromegaly can die approximately 10 years earlier than the healthy subjects. According to prior studies, approximately 60, 25 and 15% of the patients die from cardiovascular disease, respiratory complications and cancer, respectively [2] [3].

Control of serum GH and insulin-like growth factor (IGF) 1 hypersecretion by surgery or pharmacotherapy can decrease morbidity.

Remission rates for micro- and macroadenomas were 81.8% and 45.8%, respectively. Patients of older age, with a smaller tumor, lower Knosp grade, lower preoperative GH, and insulinlike growth factor 1 levels were more likely to achieve remission. Remission rate decreased significantly with repeat surgeries. Those patients with adenomas that stained positive for somatostatin receptor subtype 2A were less likely to experience tumor recurrence and more likely to respond to medical treatment with persistent or elevated GH hypersecretion [4].

Each of the biomarkers, Ki-67 and p53, along with patient's age and mixed GH-prolactin secretion showed a kind of correlation with each of aspects of the clinical, hormonal and radiologic outcome of GH-secreting pituitary neuroendocrine tumors in the series of Alimohamadi et al. [5].

## References

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