Pituitary corticotroph adenoma recurrence

Recurrent Cushing's disease occurs when the symptoms of the disease return after successful treatment. This can happen for a variety of reasons, including:

Incomplete surgical removal of the pituitary tumor: If the entire tumor is not removed during surgery, it can continue to produce cortisol and cause a recurrence of symptoms.

Regrowth of the tumor: Even if the tumor is completely removed, it can sometimes regrow and cause a recurrence of symptoms.

Ectopic production of ACTH: In rare cases, Cushing's disease can be caused by a tumor outside the pituitary gland that produces ACTH, which then stimulates cortisol production.

There is no consensus on the remission criteria for Cushing's disease or on the definition of disease recurrence after transsphenoidal surgery, and comparison of the different published series is therefore difficult. A long-term recurrence rate of Cushing's disease ranging from 2%-25% has been reported. Predictors of long-term remission reported include: 1) adenoma-related factors (aggressiveness, size, preoperative identification in MRI), 2) surgery-related factors, mainly neurosurgeon experience, 3) clinical factors, of which dependence on and duration of glucocorticoid treatment are most important, and 4) biochemical factors.

Abellán-Galiana et al. propose an ACTH value <15 pg/mL as a good long-term prognostic marker in the postoperative period of Cushing's Disease. Reaching the ACTH nadir in less time is associated to a lesser recurrence rate [1].

Low postoperative cortisol levels, less than 2 mcg/dL predict for disease remission. However, even when undetectable plasma cortisol levels are present, long-term recurrence may still occur and lifetime follow-up is required. Abellán Galiana et al. report the preliminary results of the first 20 patients with Cushing's disease operated on at our hospital using nadir cortisol levels less than 2 mcg/dl as remission criterion [2].

Patients in long-term remission of Cushing's syndrome (CS) commonly report impaired quality of life (QoL). The CushingQoL questionnaire is a disease-specific QoL questionnaire for patients diagnosed with CS. The developers of the CushingQoL recommend using a global (total) score to assess QoL.

If doctors or researchers would like to tease apart physical and psychosocial issues, the 2-subscale scoring solution would be recommended, since this solution showed to be optimal in scoring the CushingQoL. Regardless of the scoring solution used, the CushingQoL has proven to be a valuable resource for assessing health-related QoL in patients with CS [3].

References

[1]
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