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Surgical Considerations in Subclinical Cushing's Syndrome. When is it Time to Operate?

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The authors of this review article have very clearly identified an important and challenging topic about which surgeons who operate on the adrenal gland must be knowledgeable. Subclinical Cushing's syndrome (SCS) is, as the authors state, a difficult diagnosis to make, due to multiple different definitions. The central features are the presence of an adrenal mass in the setting of autonomous cortisol secretion without clinical features of Cushing's syndrome (CS). As the authors point out, the challenge is to identify which patients should have surgery. In order to make this assessment, it is important for surgeons to work in a multidisciplinary fashion with specialist endocrinologists.

It is widely accepted that the risk of malignancy is the first consideration when faced with a patient who has an adrenal mass. If the size of an adrenal incidentaloma is > 4 cm or if it has imaging features that are suspicious for malignancy, then surgery should be planned, regardless of whether there is hormonal excess. However, even in such cases, it is essential to assess hormonal production of the mass. It is critical to make the diagnosis of a pheochromocytoma, since preoperative alpha blockade will make the operation substantially safer. It is also important, however, to diagnose cortisol excess preoperatively, in order to plan for appropriate cortisol supplementation postoperatively in such patients, until their hypothalamus-pituitary-adrenal axis has returned to normal.

In patients whose adrenal incidentalomas do not meet size or imaging criteria for excision based on the concern for cancer, it becomes essential to carefully assess the patient for excess cortisol secretion. There are multiple criteria for defining cortisol excess that can be used, and it is important to ensure that a physician experienced in such investigation is involved.

In the case of a unilateral adrenal mass and evidence of SCS, the surgeon should feel confident that an adrenalectomy is likely to be beneficial to the patient. In the case of bilateral adrenal masses and SCS, the authors astutely point out the lack of data to support bilateral adrenalectomy in almost all cases. If there are bilateral adrenal masses and clear subclinical SCS, then I agree with the authors' suggestion to proceed with removing the larger adrenal gland. It is essential that the patient understands that this operation may not solve the problem, but the risks of a unilateral adrenalectomy performed via a minimally invasive approach (either transabdominal or retroperitoneal) are outweighed by the potential benefits of curing SCS syndrome in some patients.

The author's description of the pros and cons of the transperitoneal approach compared with the retroperitoneal approach is well-stated, and indicates the importance of the adrenal surgeon having the skill and experience to undertake either of these approaches. In treating patients with SCS, surgeons must possess diagnostic acumen, very sound clinical judgment and a high degree of operative skill.

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