Endorsed by AME
Italian Association of Clinical Endocrinologists
ITALIAN CHAPTER
www.aaceitalianchapter.com
Endocrine News
9/4-2017

Management of Adrenal Incidentalomas

European Society of Endocrinology (ESE) Clinical Practice Guideline with The European Network for the Study of Adrenal Tumors (ENSAT)

Editors
Renato Cozzi, Piero Baglioni

SPECIAL CIRCUMSTANCES

Patients with bilateral adrenal incidentalomas

We recommend that for patients with bilateral adrenal masses, each adrenal lesion is assessed at the time of initial detection according to the same imaging protocol as for unilateral adrenal masses to establish if either or both of the lesions are benign or malignant. In relation to functional aspects, besides hormone testing as described for unilateral AI, the additional measurement of 17-OH-progesterone should be performed in order to evaluate possibility of congenital adrenal hyperplasia. Testing for adrenal insufficiency should be considered if suspected on clinical ground or if imaging suggests bilateral infiltrative disease or haemorrhages.

Indications for surgery and follow-up in patients with bilateral AI are the same as for patients with unilateral AI. In patients with bilateral adrenal masses, bilateral adrenalectomy is not recommended for «autonomous cortisol secretion» without clinical signs of overt Cushing's syndrome. In selected patients, a unilateral adrenalectomy of the dominant lesion might be considered using an individualized approach considering age, degree of cortisol excess, general condition, comorbidities and patient preference.

***Comment**: In most cases, bilateral adrenal masses represent benign bilateral adrenocortical disease: bilateral adenomas, macronodular hyperplasia or distinct bilateral nodules with normal or atrophic cortex intervening. The possibility of metastases (especially in patients with known malignancy), adrenal lymphoma or bilateral pheochromocytoma should also be considered. «Autonomous cortisol secretion» is more frequently encountered in patients with bilateral adrenal incidentalomas, compared with those with unilateral lesions, but there is no published evidence that they should be managed differently. Adrenal venous sampling may aid in the lateralization of cortisol excess but the data is very weak. Increased levels of 17-OH-Progesterone, requested to identify 21-hydroxylase deficiency, should be interpreted with caution. In some cases, increased levels of 17-OH-Progesterone may represent increased secretion of steroid precursors in patients with adrenocortical carcinoma or in bilateral macronodular adrenal hyperplasia. In these cases low/suppressed ACTH levels may argue against congenital adrenal hyperplasia. In the few cases in which bilateral surgery is potentially indicated (e.g. bilateral pheochromocytoma), one can consider adrenal sparing surgery.*

Adrenal incidentaloma in special populations

R 6.2.1, 6.2.2. In children, adolescents, pregnant women and adults <40 years of age, urgent assessment is required because of a higher likelihood of malignancy. In these populations, use of MRI rather than CT is suggested.

R 6.2.3. The management of patients with poor general health and a higher degree of frailty should be kept in proportion to potential clinical gain.

Patients with newly diagnosed adrenal mass and a history of extra-adrenal malignancy

In these patients, the risk of the AI to represent malignancy may reach 70%. Older patients may have a higher likelihood of co-existent benign adenomas, while younger patients are more likely to have a metastasis.

Anna Avesani (annavesani@gmail.com) **& Lino Furlani**
Servizio Endocrinologia, Ospedale Classificato “Sacro Cuore - Don Calabria”, Negrar (VR)

R 6.3.1. Measurement of plasma or urinary metanephrines to exclude pheochromocytoma in patients with extra-adrenal malignancy with an indeterminate mass is recommended, even if the adrenal mass is likely to be a metastasis. Additional hormonal work-up should depend on the stage of the extra-adrenal malignancy and life expectancy (recommendation: weak).

Comment: *Pheochromocytomas are almost impossible to distinguish from metastasis by conventional imaging (including FDG-PET/CT). Furthermore pheochromocytomas can lead to life-threatening complications, especially in the context of medical interventions (surgery, biopsies, etc.).*

R 6.3.2. In patients with a history of extra-adrenal malignancy, FDG-PET/CT, performed as part of investigation for the underlying malignancy, can replace other adrenal imaging techniques (recommendation: weak).

R 6.3.3. In patients with a history of extra-adrenal malignancy, adrenal lesions characterized as benign by non-contrast CT require no further specific adrenal imaging follow-up (recommendation: strong).

R 6.3.4. In patients with a history of extra-adrenal malignancy, adrenal lesions characterized as indeterminate, imaging follow-up assessing the potential growth of the lesion is recommended at the same interval as imaging for the primary malignancy. Alternatively FDG-PET/CT, surgical resection or a biopsy can be considered.

R 6.3.5. A biopsy of an adrenal mass is suggested only if all of the following criteria are fulfilled:

- The lesion is hormonally inactive.
- The lesion has not been conclusively characterized as benign by imaging.
- Management would be altered by knowledge of the histology.

R 6.3.6. Assessment of residual adrenal function is recommended in patients with large bilateral metastases (recommendation: strong).

CONCLUSIONS

Given that most recommendations in this guideline are based on weak evidence, there is clearly room for studies aiming to improve the evidence base of management of AI.

REFERENCE

Fassnacht M, Arlt W, Bancos I, et al. Management of adrenal incidentalomas: European Society of Endocrinology Clinical Practice Guideline in collaboration with the European Network for the Study of Adrenal Tumors. Eur J Endocrinol 2016, 175: G1-34.