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Management of Adrenal Incidentalomas

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

Editors
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QUESTION 3: SURGICAL INDICATION

R 4.1. Adrenalectomy is recommended as the standard of care for unilateral adrenal tumors with clinically significant hormone excess (primary aldosteronism, Cushing's syndrome and pheochromocytoma) (recommendation: strong).

R 4.2. Avoidance of surgery is recommended in patients with an asymptomatic, non-functioning unilateral adrenal mass and obvious benign features on imaging studies (recommendation: strong; evidence: very low).

***Comment**: While the authors agree that non-functioning tumors ≤4 cm and obvious benign features on imaging studies need not undergo surgery, opinions differ on management of tumors of larger size. While a defined cut-off above which surgery must be performed cannot be established, the authors acknowledge that with a larger tumor size, patients and clinicians may feel increasingly uncomfortable, and in these cases an individualized approach is deemed most appropriate.*

R 4.3, 4.4, 4.5. Laparoscopic adrenalectomy is suggested in patients with unilateral adrenal masses with radiological findings suspicious of malignancy and a diameter ≤6 cm, but without evidence of local invasion (recommendation: weak; evidence: very low quality). Open adrenalectomy is recommended for unilateral adrenal masses with radiological findings suspicious of malignancy and signs of local invasion (recommendation: strong; evidence: very low quality). An individualized approach is suggested in patients that do not fall in one of the above mentioned categories.

R 4.6. Perioperative glucocorticoid treatment at major surgical stress doses (preferably with hydrocortisone), as recommended by guidelines, is recommended in the immediate post-operative period in all patients undergoing surgery for an adrenal tumor, where there is evidence of «possible autonomous cortisol secretion» or «autonomous cortisol secretion» (recommendation: strong).

QUESTION 4: WHICH FOLLOW-UP FOR PATIENTS NOT UNDERGOING ADRENAL SURGERY?

R 5.1. Patients with an adrenal mass <4 cm with clear benign features on imaging studies do not need further imaging during follow-up (recommendation: weak; evidence: very low quality). One follow-up imaging (non-contrast CT or MRI) at 6-12 months might be considered in lesions >4 cm (expert opinion).

R 5.2. In patients with an indeterminate adrenal mass (by imaging), opting not to undergo adrenalectomy following initial assessment, a repeat non-contrast CT or MRI after 6-12 months is suggested to exclude significant growth (recommendation: weak; evidence: very low quality):

- If the AI enlarges by more than 20% (in addition to at least a 5 mm increase in maximum diameter) during this period, surgical resection is suggested.
- If there is growth of the lesion below this threshold, additional imaging again after 6-12 months might be performed.

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R.5.3. In patients with a normal hormonal work-up at initial evaluation no repeated hormonal work up is suggested unless new clinical signs of endocrine activity appear or there is worsening of comorbidities (recommendation: weak; evidence: very low quality).

Comment: *Patients with AI and initial hormonal work-up consistent with a non-functioning lesion have a risk developing excess hormonal secretion below 0.3%. Development of «autonomous cortisol secretion» is the most frequently reported event during the follow up and may occur in 0-11% of patients with non-functioning AI.*

R.5.4. In patients with «autonomous cortisol secretion» without signs of overt Cushing's syndrome, we suggest annual clinical reassessment for cortisol excess and comorbidities potentially related to cortisol excess (recommendation: weak; evidence: very low quality).

Comment: *Follow-up by an endocrinologist beyond 4 years is not needed in patients with no relevant change during this time.*

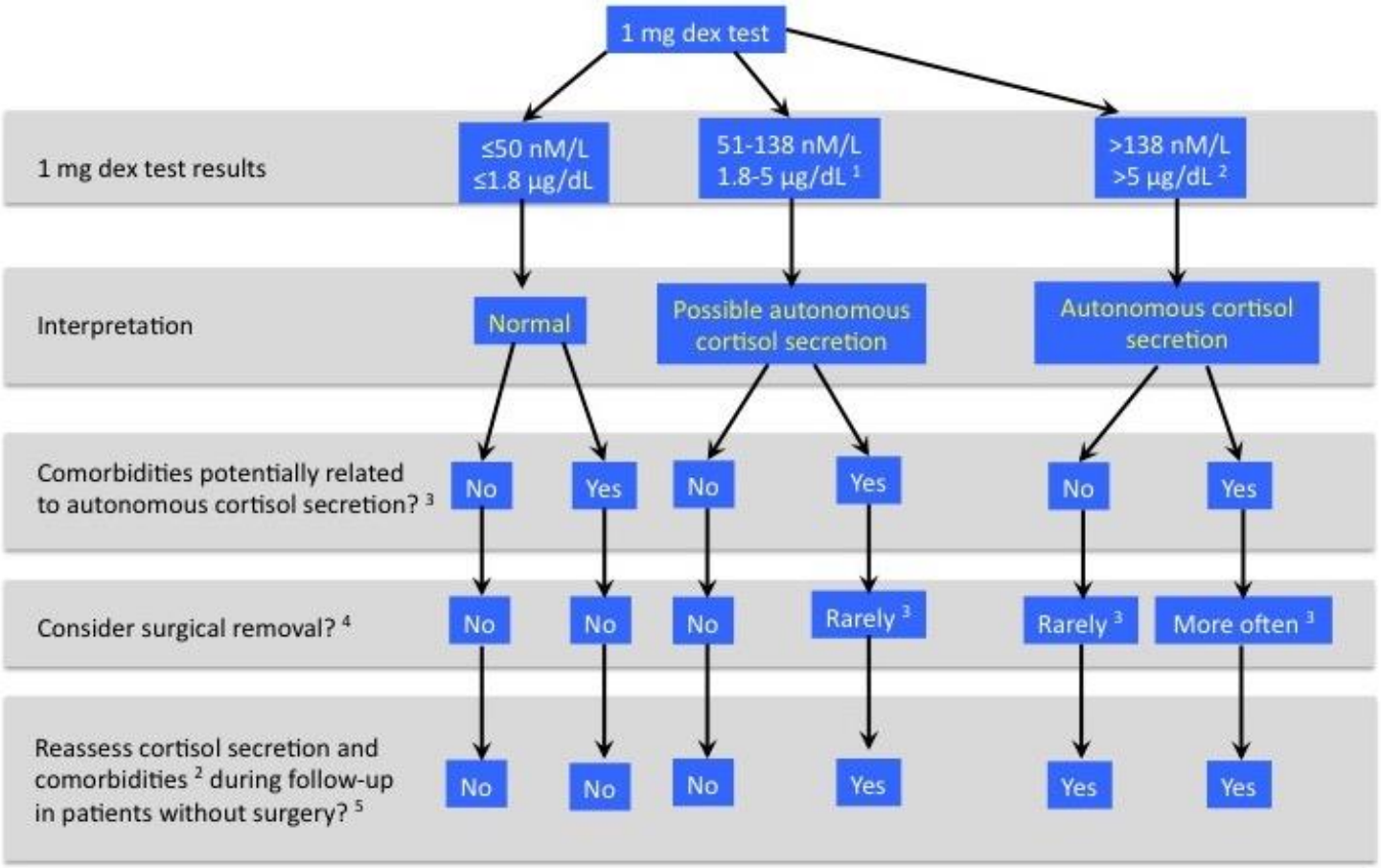

Figure 2
Assessment and management of «autonomous cortisol secretion» in patients with AI.
[1]Consider additional biochemical tests to better judge the degree of cortisol secretion: plasma ACTH, 24-h urinary-free cortisol (and/or late-night salivary cortisol) and repetition of the 1 mg dexamethasone test in 3-12 months.
[2]Perform additional biochemical tests to better judge the degree of cortisol secretion: plasma ACTH, 24-h urinary-free cortisol (and/or late-night salivary cortisol) and repetition of the 1 mg dexamethasone test in 3-12 months.
[3]Hypertension. Glucose Intollerance. Obesity. Dyslipidemia. Osteoporosis.
[4]Choice for surgery should always be individualized.
[5]Need of follow-up by an endocrinologist for 2-4 years.

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.