Are adrenal incidentalomas components of metabolic syndrome?

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INTRODUCTION

- Easy access to imaging has led to an increase in the number of patients with coincidentally discovered adrenal tumours, also called as adrenal incidentalomas (AI).
- Nowadays AI is diagnosed in 0.4% and 2-4% patients by USG and CT respectively.
- Metabolic syndrome (MS) is a group of interrelated factors with increased risk of atherosclerosis, obesity and DM2.

AIMS OF THE STUDY

An assessment of the frequency of the components of metabolic syndrome according to the criteria of the International Diabetes Federation (IDF) in patients with adrenal incidentaloma without hormonal activity.

MATERIALS AND METHODS

The study comprised of patients with AI without hormonal activity, confirmed in CT. The adrenal function was determined: circadian rhythm of cortisol and/or dexamethasone suppression test, aldosterone, plasma renin activity (PRA), DHEAS, androstenedione, metanephrine in urine.

In some cases, ACTH and 17 hydroxy progesterone were determined. In patients with AI without hormonal activity physical examination was conducted with BMI included, the waist circumference and blood pressure. The biochemical assays included: OGTT according to WHO, fasting insulin and lipids (total cholesterol, HDL, LDL, triglycerides). HOMA IR was calculated. IR was estimated by HOMA-IR 2. MS was diagnosed according to the IDF criteria established in 2009.

RESULTS

Characteristics of patients with AI with normal hormonal activity

Laboratory results of patients with AI with normal hormonal activity

HOMA IR and fasting insulin concentration in patients with AI with normal hormonal activity

MS diagnosis in patients with AI with normal hormonal activity

CONCLUSIONS

- Metabolic syndrome was more often diagnosed in patients with adrenal incidentaloma without hormonal activity as compared to the general population.
- Insulin resistance did not correlate with the size of the adrenal incidentaloma.
- Age and sex were the factors affecting the frequency of the metabolic syndrome.
- Patients with adrenal incidentaloma without hormonal activity are the risk group of prediabetes and diabetes.