Do lipid profile predict subclinical Cushing's Syndrome in patients with adrenal incidentalomas?

Mintziori G, Georgiou Th, Siolos A, Adamidou F, Efstathiadou Z, Panagiotou A, Anagnostis P, Kita M

Department of Endocrinology, Ippokratio General Hospital, Thessaloniki, Greece

Introduction

Adrenal Incidentalomas (AIs) have been associated with an increased risk of metabolic syndrome and dyslipidemia, though evidence regarding the latter is limited and, sometimes conflicting (1-3).

Lipid abnormalities in patients with AIs have been described to be associated with subclinical hypercortisolism.

Our aim was to test if lipid profile in patients with adrenal incidentalomas may predict subclinical Cushing's Syndrome (sCS).

Material and Methods

A prospective, cohort study was conducted at the Department of Endocrinology, Ippokratio General Hospital of Thessaloniki, Greece.

Ninety-four patients (n=94) with adrenal incidentalomas (AIs) were included in a prospective cohort study.

All patients were followed up for three years and alternations of their hormonal and lipid profiles were recorded. IBM SPSS Statistics v20 were used.

Results

The 94 patients (25 men and 69 women) of our cohort harbored 111 AIs.

There were no differences between patients with sCS and those without, with respect to their baseline lipid profile and blood pressure (Fig 1).

	Patients with subclinical Cushing	Patients without subclinical Cushing	P value
Cholesterol	223±12	205±4	0.195
LDL	137±11	124±4	0.267
HDL	54±2	55±2	0.809
Triglycerides	153±13	130±6	0.245
Non-HDL	169±13	150±4	0.176
Total (N)	9	85	

Fig 1. Patients with and without Subclinical Cushing Syndrome

33 patients (35%) were treated with statins at the time of diagnosis

There were no differences among patients with and without sCs regarding the use of statins at the time of diagnosis.

Non-HDL concentrations decreased over time (Repeated Measures ANOVA, p=0.013), despite patients' Body Mass Index (BMI) remaining unchanged.

Logistic regression revealed that the only predictor of sCS is the size of adrenal incidentalomas, as calculated by computed tomography (CT).

Conclusion

The current study demonstrated that lipid profile at baseline or during follow up cannot predict sCS in patients with adrenal incidentalomas.

The improvement of patients' lipid profile during follow up is probably due to better medical management.

References

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