STRESZCZENIE W JĘZYKU ANGIELSKIM

Adrenal incidentaloma (AI) is an abnormal tissue mass in the adrenal gland that does not show hormonal activity, found during imaging examinations performed for non-endocrine reasons. Hypercortisolemia, also subclinical form, results in an increased incidence of obesity, hypertension, carbohydrate metabolism disorders and hyperlipidemia. Early stages of cardiovascular remodeling can be observed among asymptomatic patients with adrenal adenomas. Vascular changes precede the development of cardiovascular diseases and can increase cardiovascular risk (CVR). Therefore, NFAI may constitute a CVR factor independent of traditional ones.

The aim of the study was to analyze the incidence of metabolic alterations and the carotid intima-media thickness (CIMT) in NFAI patients. CVR according to SCORE and SCORE2 algorithms was assessed in both groups. Moreover, the relationships between CIMT, metabolic and hormonal parameters was determined in NFAI group. The relationship between CVR based on SCORE and SCORE2 algorithms, metabolic and hormonal parameters was determined in NFAI patients.

The study was conducted on a group of 46 people with NFAI hospitalized at the Clinical Department of Endocrinology, Diabetology and Internal Medicine at the Provincial Specialist Hospital in Olsztyn in the period from January 2020 to December 2020. The control group consisted of 44 people without diagnosed adrenal pathology. In both groups, a medical and a physical examination with anthropometric measurements were preformed. Laboratory tests included measurements of sodium, potassium, creatinine, fasting insulin concentrations, lipid profile, 75g glucose tolerance test (OGTT). IMT measurements of the common carotid artery were performed using ultrasonography. CVR was estimated using the coronary risk assessment algorithm (SCORE and SCORE2).

The NFAI group showed significantly higher waist circumference, higher systolic and diastolic blood pressure, higher sodium and glucose levels in 2h OGTT, a higher CIMT and a higher CVR calculated according to the SCORE algorithm. Hypertension and impaired glucose tolerance were more common in the NFAI group. Statistically significant positive correlations were found between CIMT and age, waist circumference, diastolic blood pressure and CVR based on SCORE algorithm. There was a statistically significant positive correlation between CIMT and serum cortisol levels after 1 mg dexamethasone suppression test.

Based on the research conducted, the following conclusions were drawn:

1. The presence of NFAI has a significant impact on the incidence of abdominal obesity, hypertension and impaired glucose tolerance.
2. Among patients with NFAI, early stages of remodeling in the vascular system in the form of an increased CIMT can be observed.
3. Among patients with NFAI, a higher CVR using SCORE algorithm can be found.
4. NFAI may be an independent CVR factor.
5. This topic requires further multi-center research, which will allow to establish preventive and therapeutic options in this group of people.