



INCIDENCE AND PECULARITIES OF THYROID CANCER IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

Yuzvenko T.Yu., Pankiv V.I.

Ukrainian Scientific and Practical Center of Endocrine Surgery,
Transplantation of Endocrine Organs and Tissues, Kiev, Ukraine

Objectives

Diabetes mellitus is a risk factor for cancer, specifically of breast, endometrium, bladder, liver, colorectum, and pancreas. The aim is to study the frequency and morphological features of thyroid cancer in patients with type 2 diabetes mellitus (DM).

Methods

The study involved 45 patients with thyroid cancer and type 2 DM. 980 patients with thyroid cancer who underwent treatment at the surgical department of our Center for the period from 2010 to 2012 years. The examination included the study of patients' complaints, measurement of blood glucose profiles, glycated hemoglobin, immunoreactive insulin (IRI), C-peptide, HOMA-IR index, lipid profile, ultrasound (US) of thyroid and abdominal organs. In addition conducted fine needle aspiration of thyroid nodules before surgery, pathological examination after surgical treatment, the determination of interleukin-6 (IL-6). We studied the incidence of thyroid cancer in the general population of Ukraine. Statistical data were processed using MS Excel. Results are expressed as the mean \pm standard error indicators ($M \pm m$).

Results

The mean age of patients with type 2 DM and thyroid cancer was 59.2 ± 2.7 years, duration of DM (from the time of diagnosis) – 7.1 ± 1.3 years, body mass index (BMI) – 31.7 ± 2.6 kg/m². All patients established insulin resistance (IRI level was 31.26 ± 2.81 mU/L, HOMA-IR index – 14.57 ± 2.31). The frequency of type 2 DM among all patients treated with thyroid cancer is 4.6%. Among patients with thyroid cancer and type 2 DM were mostly women (32; 71.1%). Most patients had papillary thyroid cancer (37; 82.2%) than follicular one. Among the total population of Ukraine thyroid cancer had been diagnosed in 39,042 patients, representing 74.8 per 100 000. At the same time among the inhabitants of Kiev incidence of thyroid cancer reaches 3039 (177.5 per 100 000). Obviously that the presence of DM is associated with an increased risk development of thyroid cancer. The number of newly diagnosed patients with thyroid cancer in Ukraine increase and in 2011 was 2984, or 6.5 per 100 000 of population, but in some regions, for example, in Kiev and the Kiev region, the incidence is respectively 12.9 and 12.2 per 100 000 of population.

Conclusions

Patients with DM have a higher incidence of thyroid cancer compared with the general population. The frequency of type 2 DM among patients with thyroid cancer is 4.6% with a predominance of women (71.1%). Most patients had the papillary thyroid cancer (82.2%) than follicular one.