

MATERIÁLY

**XII MEZINÁRODNÍ VĚDECKO - PRAKTICKÁ
KONFERENCE**

**«AKTUÁLNÍ VĚDECKÉ VYMOŽENOSTI -
2016»**

22 - 30 června 2016 roku

Díl 10
Biologické vědy
Ekologie
Medicína
Chemie a chemické technologie
Fyzika
Geografie a geologie

Praha
Publishing House «Education and Science» s.r.o
2016

Vydáno Publishing House «Education and Science»,
Frýdlanská 15/1314, Praha 8
Spolu s DSP SHID, Berdianskaja 61 Б, Dnepropetrovsk

Materiály XII mezinárodní vědecko - praktická konference
«Aktuální vědecké vymoženosti– 2016». - Díl 10. Biologické vědy .
Ekologie.Medicína. Chemie a chemické technologie. Fyzika. Geografie a geologie.:
Praha. Publishing House «Education and Science» s.r.o - 88 stran

Šéfredaktor: Prof. JUDr Zdeněk Černák

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Manažer: Mgr. Helena Žáková

Technický pracovník: Bc. Kateřina Zahradníčková

XII sběrné nádobě obsahují materiály mezinárodní vědecko - praktická
konference «Aktuální vědecké vymoženosti» (22 - 30 června 2016 roku)
po sekcích Biologické vědy . Ekologie.Medicína. Chemie a chemické
technologie. Fyzika. Geografie a geologie.

Pro studentů, aspirantů a vědeckých pracovníků

Cena 270 Kč

ISBN 978-966-8736-05-6

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Zdravotnická organizace

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ASSESSING THE PREVALENCE OF THYROID DISEASE IN CHERNIVTSI REGION OVER THE LAST 5 YEARS

Diseases of the thyroid gland (TG) have drawn a lot of attention recently. On the one hand, this is due to the fact that it is TG that responds actively to geochemical environment, followed by the onset of some of thyroid diseases. On the other hand, in the current conditions the population remains alone with the adverse effects of the environment, as an effective experience of the international community in fighting iodine deficiency has not been implemented in Ukraine.

In general, diseases of the endocrine glands, particularly the thyroid pathology cause great social and economic loss that is determined by the cost of medical care and social security (due to disability, disablement, untimely death of patients).

Studying the prevalence of thyroid diseases was previously considered in terms of total endocrine sickness related to previous years. Unfortunately, the statistical analysis and probability of these changes were not considered. We have analysed the official statistics of Ministry of Health of Ukraine (analysis of endocrinology service of Chernivtsi region for the Ministry of Health of Ukraine) regarding the prevalence of adult and child population in thyroid pathology over the last 5 years between 2011 and 2015. The analysis of official statistics showed a high prevalence of endocrine diseases. According to these criteria the endocrine pathology is one of the leading in the structure of overall morbidity. Ukraine is characterized by an increase in the number of patients with various endocrinopathies, the most common among them are diabetes mellitus (DM) and thyroid diseases.

At the moment, we decided to concentrate our attention on the pathology of the thyroid gland, which was first described back in the second century BC by a Roman physician Galen and it occupies an important place among endocrine diseases after DM. The structure of thyroid diseases, included in official statistics, consists of euthyroid diffuse goiter, nodular goiter, hyperthyroidism, hypothyroidism, thyroiditis,

thyroid cancer. Diffuse goiter is the most common pathology. Goiter is an enlargement of the TG above its normal size. Without touching the age and sex features of the gland parameters, we note that its size is determined by palpation and ultrasound measurement of its volume. According to a current classification, WHO identifies the first and second degrees of goiter. In order to attract the attention of endocrinologists to the need for pharmacological treatment of this pathology in Ukraine, official statistics of diffuse goiter identifies the II–III degree of goiter instead of the II degree.

The area in which the prevalence of the first degree thyroid hyperplasia is 5% or more among children or 30% or more among adults is considered to be goiter endemic. Ukraine is an endemic area with low iodine in the environment. There is no region in Ukraine, where people do not feel the iodine deficiency, and Chernivtsi region is not an exception. Iodine deficiency is especially dangerous for pregnant women, resulting in an increased risk of having children with low birth weight, sensorineural deafness, spastic paralysis, cretinism as well as stillbirths and miscarriages. Iodine deficiency affects the mental development of older children significantly.

Table 1

**Prevalence of endocrine thyroid disease
in Chernivtsi region over the last 5 years**

Nosologica unities	Patients registered in 2011				Patients registered in 2012				Patients registered in 2013			
	Adults		Children under 17		Adults		Children under 17		Adults		Children under 17	
	Abs.number	on 100 th.	Abs.numbe	on 100 th.	Abs.numbe	on 100 th..	Abs.numbe	on 100 th.	Abs.numbe	on 100 th.	Abs.numbe	on 100 th.
Thyrotoxic osis E05	1134	158,4	8	4,3	1196	166,7	-	-	1272	176,6	-	-

Nodular goiter E04.1, 2.4, D34	3128	437,0	23	12,3	3445	480,3	-	-	3828	531,4	-	-
thyroiditis E06	2115	295,5	152	81,9	2152	300,0	-	-	2252	314,0	-	-
Hypothyroidism	1533	214,2	68	36,6	1631	227,3	-	-	1799	239,5	-	-
02-03 E, E89, incl. Postoperati ve hypothyroidism	277	38,7	5	2,6	294	41,0	-	-	325	45,1	-	-
Simple goiter E01, E04	21477	3000,7	12034	6487,5	22918	3195,0	-	-	24346	3379,0	-	-
I degr.	16837	2352,5	11056	5960,2	18143	2529,3	-	-	19362	2687,0	-	-
IIdegr. - III degr.	4640	648,3	978	527,2	4775	665,7	-	-	4984	691,9	-	-
Thyroid cancer C 73	313	43,7	6	3,2	256	35,6	-	-	267	37,0	-	-
hypoparathyroidism E20	17	2,3	1	0,5	16	2,2	-	-	17	2,3	-	-
hyperparathyroidism E21	1	0,1	0	-	3	0,41	-	-	3	0,4	-	-

Table 1(extension)

Nosological unities	Patients registered in 2014				Patients registered in 2015			
	Adults		Children under 17		Adults		Children under 17	
	Abs.nu mber	On 100 th.	Abs.n umber	On 100 th.	Abs.nu mber	On 100 th.	Abs.n umber	On 100 th.
Thyrotoxicosis E05	1335	185,2	-	-	1424	197,3	12	6,5
Nodular goiter E04.1, 2.4, D34	4358	604,7	-	-	4812	666,9	38	20,5
Thyroiditis E06	2424	336,3	-	-	2633	364,9	218	117,6
Hypothyroidism	1882	261,1	-	-	2151	298,1	71	38,3
02-03 E, E89, incl. postoperative hypothyroidism	356	49,4	-	-	371	51,4	3	1,6
Simple goiter E01, E04	25719	3568,6	-	-	26933	3732,5	12937	6981,3
I degr.	20528	2848,3	-	-	5364	743,4	956	515,9
IIdegr. - III degr..	5191	720,3	-	-	425	58,9	3	1,6
Thyroid cancer C 73	377	52,3	-	-	19	2,6	2	1,1
Hypoparathyroidism E20	18	2,5	-	-	6	0,8	-	-
Hyperparathyroidism E21	7	0,9	-	-	8	1,1	-	-

The structure of endocrine pathology in the adult population of Chernivtsi region is dominated by thyroid disease. The structure of endocrine diseases is shown

in Fig.1

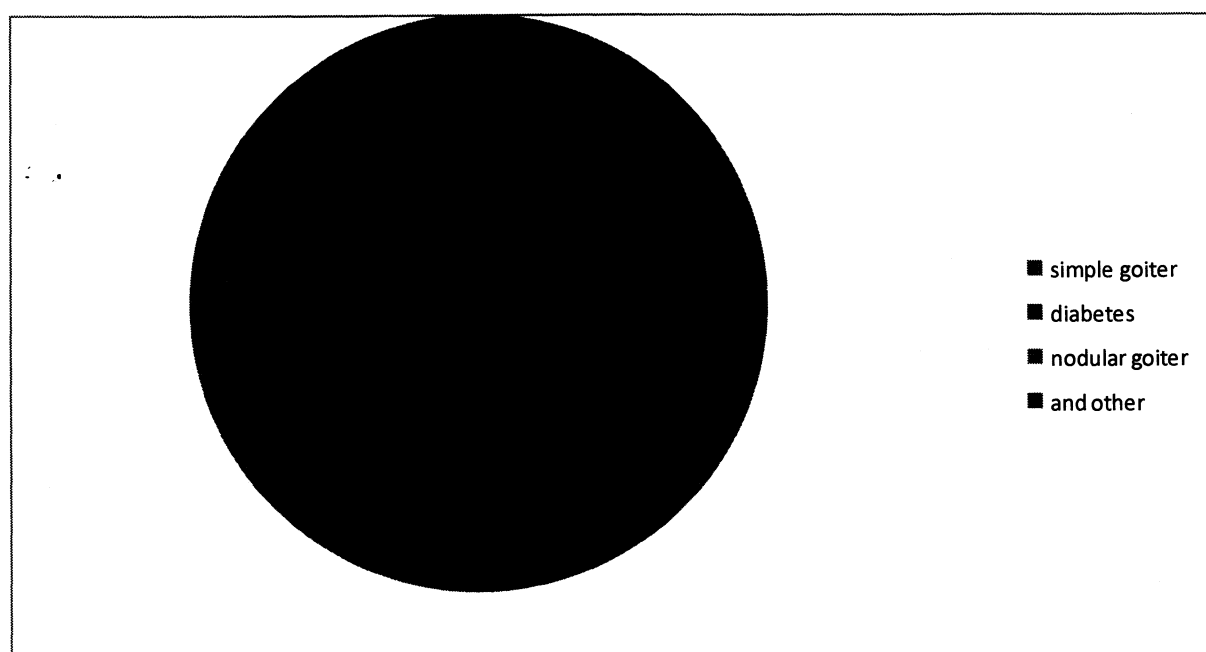


Fig. 1 The structure of endocrine pathology in the adult population of Chernivtsi region.

It should be noted that euthyroid diffuse goiter and DM are the most common diseases. And if we take into consideration the fact that thyroid diseases also include hyperthyroidism, hypothyroidism, thyroiditis and cancer of the gland, it can be argued that thyroid diseases account for nearly half of all endocrinopathies.

Unlike the initial stage of the first degree goiter, that of the II degree defies regression immediately after improving the iodine status. We need at least 5 years for the positive trend to reduce the incidence of this stage of goiter to manifest itself. In previous years there was a gradual shift in the cases of I degree goiter to the II degree, indicating a lack of preventive work to eliminate IDD and, therefore, an inadequate intake of dietary trace element iodine, but even now the prevalence of the I-II degree goiter does not allow to say that the residents of Bukovyna consume enough dietary iodine. The prevalence of thyroid endocrine pathology in the adult population of Chernivtsi region is presented in Fig.2.1. and 2.2.

Fig.2.1.

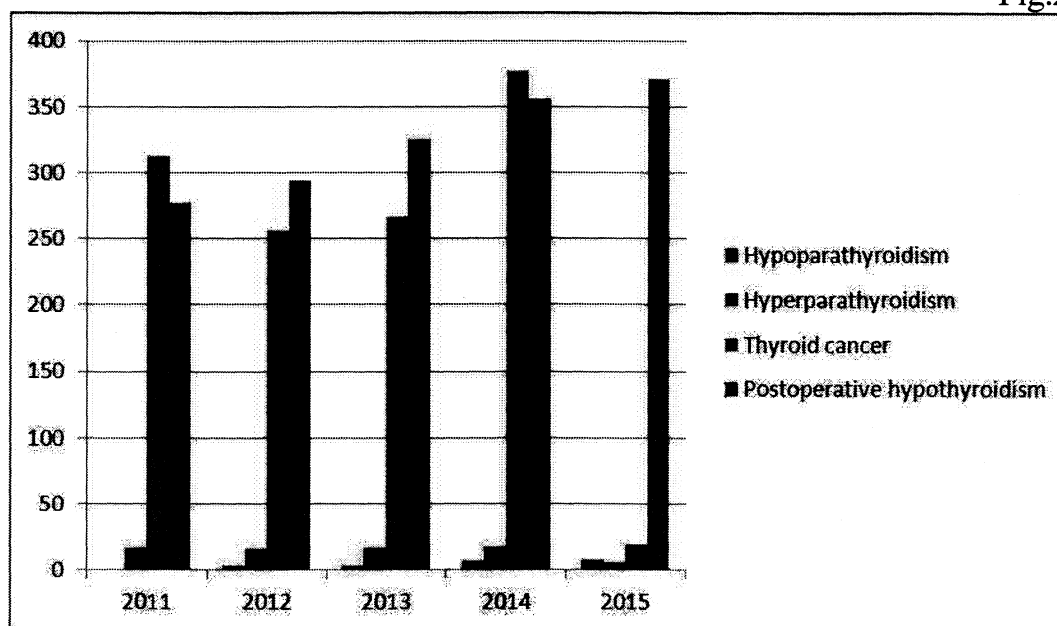


Fig.2.2.

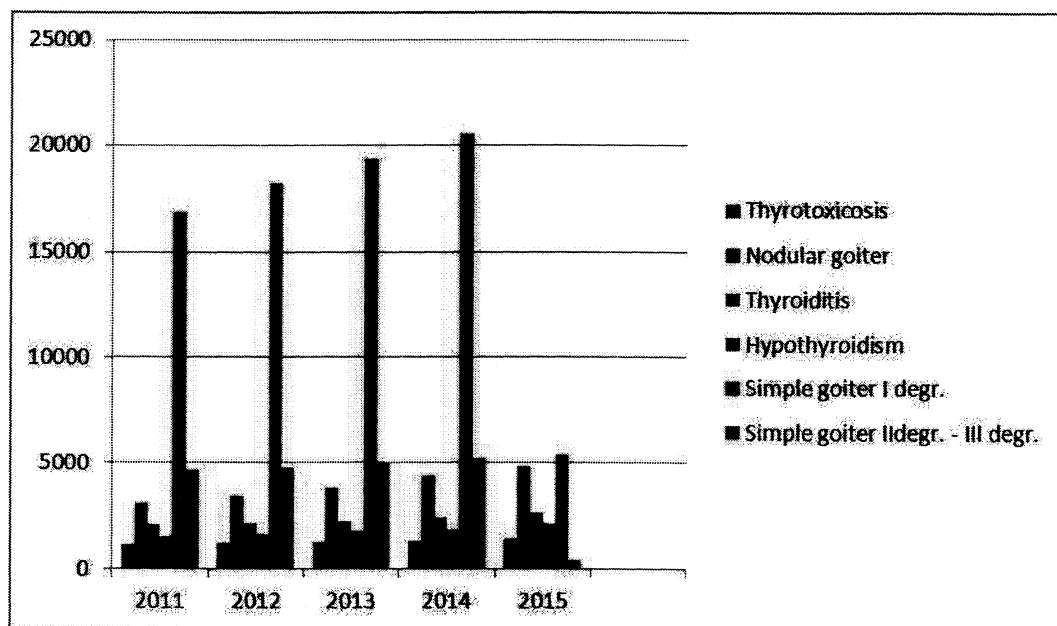


Fig. 2.1. and 2.2. The prevalence of thyroid diseases among adults in Chernivtsi region (on 100 thousand people)

Iodine prophylaxis in the region covers 70% of the population. Preventive maintenance is carried out in three areas: mass (the use of iodized salt, milk and bread), group (is made with drugs of potassium iodide in special risk groups (children, adolescents, pregnant women)), individual (by a doctor's prescription and as an autotherapy).

In general, diseases of the endocrine glands, particularly the thyroid pathology cause great social and economic loss that is determined by the cost of medical care and social security (due to disability, disablement, untimely death of patients).

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