4. Бектасова М.В. Профилактика профессионального заражения парентеральными вирусными гепатитами медицинского персонала лечебных учреждений Приморского края // здоровье. Медицинская экология. Наука -2014 - №4

5. Григорьевская З.В. Актуальность проблемы госпитальных инфекций // Вестник РОНЦ им. Н.Н.Блохина -2017

Literature.

1.Dezinfekciya: uchebnoe posobie [Elektronnyj resurs]/ V.L. Osipova - M.: GEOTAR-Media, 2018

2.Teoreticheskie osnovy sestrinskogo dela [Elektronnyj resurs]: uchebnik / S. A. Muhina, I. I. Tarnovskaya. - 2-e izd., ispr. i dop. - M.: GEOTAR-Media, 2018.

3. SanPiN 2.1.7.2790-10 «Sanitarno-epidemiollogicheskie trebovaniya k

4. Bektasova M.V. Profilaktika professional'nogo zarazheniya parenteral'nymi virusnymi gepatitami medicinskogo personala lechebnyh uchrezhdenij Primorskogo kraya // zdorov'e. Medicinskaya ekologiya. Nauka -2014 - №4

5. Grigor'evskaya Z.V. Aktual'nost' problemy gospital'nyh infekcij // Vestnik RONC im. N.N.Blohina -2017

УДК 616.441

ОСНОВНЫЕ ПРЕДИКТОРЫ ОТДАЛЕННЫХ РЕЗУЛЬТАТОВ В ЛЕЧЕНИЯ ТИРЕТОКСИКОЗА ПРИ ПРОВЕДЕНИИ РАДИОЙОДТЕРАПИИ

Масалова Н.Н.
Дальневосточный Государственный медицинский Университет,
Россия, 680000, Хабаровск, ул. Муравьева-Амурского, 35

THE MAIN PREDICTORS OF REMOTE RESULTS IN TREATMENT OF THYROTOXICOSIS BY RADIOIDTHERAPY

N.N. Masalova
Far-Eastern State Medical University
Russia, 680000, Khabarovsk
DOI: 10.31618/ESU.2413-9335.2022.4.95.1624

АННОТАЦИЯ

В исследование включены 96 пациентов с токсическим зобом, среди которых у 57 была диагностирована болезнь Грейвса (БГ), у 39 - функциональная автономия щитовидной железы, обусловленная многоузловым токсическим зобом. Все пациенты получили радиойодтерапию (РЙТ), после чего наблюдались динамически. Было показано, что назначение стандартной активности ^{131}I (400 МБк) ассоциировалось с высоким риском рецидива тиреотоксикоза (40.3%) при БГ. Основными предикторами отдаленных результатов РЙТ был объем щитовидной железы и уровень антител к рецептору тиреотропного гормона (ат р-ТТГ) при тиреотоксикозе аутоиммунного генеза, обусловленном БГ.

ABSTRACT

The study included 96 patients with toxic goiter, among whom 57 were diagnosed with Graves' disease, and 39 – functional autonomy of the thyroid gland, represented by multinodular toxic goiter. All patients received ^{131}I therapy, after which they were observed dynamically. It was shown that the appointment of standard activity of ^{131}I (400 MBq) is associated with a high risk of thyrotoxicosis recurrence (40.3%) in Graves' disease. The main predictors of the long-term results of radioiodine therapy are thyroid volume and the level of the antibodies to the thyroid stimulating hormone receptor in thyrotoxicosis of autoimmune origin caused by Graves' disease.

Ключевые слова: болезнь Грейвса, многоузловой токсический зоб, тиреотоксикоз, радиойодтерапия, антитела к рецептору тиреотропного гормона.

Key words: Graves' disease, multinodular toxic goiter, thyrotoxicosis, ^{131}I therapy, antibodies to the thyroid stimulating hormone receptor.

Thyrotoxic forms of goiter, due to both diffuse toxic goiter and nodular forms, occupy a leading place in the structure of thyroid pathology. In young people, the main cause of thyrotoxicosis is diffuse toxic goiter of autoimmune origin, while in people over 60 years of age living in regions of iodine deficiency, the most common cause of thyrotoxicosis is the development of functional autonomy (FA) against the background of a long-term multinodular euthyroid goiter.

Currently, three main methods of treating thyrotoxicosis are used: pharmacotherapy (thyrostatic drugs), a surgical method, and radioactive iodine therapy. The main disadvantage of thyrostatic therapy is a rather high risk of developing thyrotoxicosis relapse after its cessation and, accordingly, a relatively low probability of persistent remission [1]. Surgical treatment due to the high cost and risk of complications (paresis of the recurrent nerve, hypoparathyroidism) is used less and less in the world. The most promising treatment for hyperthyroidism syndrome is radioiodine therapy (RIT) [4].

Purpose of the study – to evaluate the significance of some clinical and laboratory parameters as predictors of long-term results of ^{131}I treatment and to optimize the RIT method for outpatient conditions.

Materials and methods

The study included 96 patients with two main pathogenetic forms of toxic goiter: 57 patients with Graves' disease (GD), 39 patients with multinodular toxic goiter (MNTG). The average age of patients with GD was 42 ± 0.64 years, patients with MNTG – 59.89 ± 0.72 years; duration of thyrotoxicosis – 18 [10; 52] months.

When conducting RIT, an isotonic aqueous solution of sodium iodide taken per os was used. A fixed activity of ^{131}I was assigned – 200 MBq, twice, with an interval of 2 months (total activity 400 MBq). In the absence of euthyroidism, upon reaching 6 months, a third course of RIT was performed.

Prior to RIT, all patients underwent drug euthyroidism and underwent standard research, including thyroid function (TR) function assessment: thyroid stimulating hormone (TSH), free thyroxine (fT_4), antibodies to thyroid stimulating hormone receptor (AB r-TSH); assessment of TR size by ultrasound. A second study of these indicators was carried out 6 months after RIT.

Statistical analysis was performed using the STATISTICA 6.0 program and the application software package. The data obtained in the tables and in the text are presented as relative values – (%), as well as (M ± m), where M is arithmetic mean value, m is the standard error of the mean. The significance of differences was determined using Student's t-test for paired variables. Differences were considered significant at $p < 0.05$. To assess the relationships between the studied phenomena, we used a correlation analysis (the square method) with an assessment of the reliability of the obtained correlation coefficients.

Results and discussion

Analyzing the outcome of treatment, it should be noted that the overall RIT efficiency indicator was 66.7%. In GD, positive results (hypothyroidism, euthyroidism) were observed in 59.7% of cases: hypothyroidism occurred in 27 patients (47.4%), euthyroid state was observed in 7 patients (12.3 %). The persistence of thyrotoxicosis after two courses of RIT was determined in 23 patients with GD (40.3%). The rather high frequency of the absence of the effect of RIT in GD can be explained by the more severe course of thyrotoxicosis due to the autoimmune nature of this disease and the diffuse nature of the TR lesion [2,3].

In the group with MNTG, persistent euthyroid state was observed in 17 patients (43.6%), hypothyroidism was achieved in 13 patients (33.3%), i.e. favorable treatment outcomes with this pathogenetic variant of thyrotoxicosis were noted in 76.9%. In the group of patients with MNTG 6 months after RIT, thyrotoxicosis persisted only in 9 patients (23.1%).

The thyrotoxicosis persisting 6 months after RIT in some patients indicated insufficient ^{131}I activity and required re-administration of the radiopharmaceutical, resulting in a total ^{131}I activity of 600 MBq in this group. The overall treatment results are presented in table 1.

Table 1.

RIT results by a two-stage course depending on the genesis of thyrotoxicosis after 6 months

Disease	Number of patients	Hypothyroidism		Euthyroidism		Relapse		Overall performance indicator
		Abs.	%	Abs.	%	Abs.	%	%
GD	57	27	47,4	7	12,3*	23	40,3	59,7
MNTG	39	13	33,3	17	43,6*	9	23,1	76,9
Total	96	40	41,7	24	25,0	32	33,3	66,7

Note: significance of differences in outcomes in two pathogenetic variants - *p<0,05

A clear link between the initial TR volume and the RIT results should be noted. According to our observations, a large volume of TR in GD was a risk factor for the recurrence of thyrotoxicosis after ^{131}I therapy, which is consistent with the literature [5,6[. In patients with favorable RIT outcomes (hypothyroidism and euthyroidism), the initial volume of TR was significantly lower than among patients in whom thyrotoxicosis continued (21.71 ± 0.62 cm_3 and 38.13 ± 1.32 cm_3, respectively) ($p < 0.05$). A similar pattern was found for patients with MNTG.

The main marker of thyrotoxicosis of autoimmune genesis is an increase in the titer of p-TSH antibodies [1]. According to the results of the study, in the group of patients with favorable RIT outcomes (hypothyroidism and euthyroidism) (n = 34), the p-TSH AB titer in 100% was within the reference values (<11 U/L), which indicates immunological remission of GD and may be seen as a predictor of a favorable outcome for RIT. In the group of patients with relapse of thyrotoxicosis (n = 23), in contrast, in 93% of cases, a significant increase in the titer of p-TSH AB was detected (> 11 U/L), which indicated the absence of immunological remission and was a risk factor for the relapse of thyrotoxicosis after RIT.

During the study, a correlation analysis was performed between the initial volume of TR and the level of TSH 6 months after RIT, which established the presence of a reliable correlation negative weak link r = - 0.36 ($p < 0.05$). In addition, a correlation analysis was performed between indicators of thyroid status (TSH level 6 months after RIT) and a titer AT of p-TSH in the group of patients with GD, which established the presence of a reliable negative mean connection r = - 0.64 (p < 0, 05).

Thus, the absence of immunological remission was a risk factor for the development of thyrotoxicosis recurrence during RIT in the group of patients with GD. The results of the study suggest that the increase in the level of p-TSH AB is an independent marker of long-term RIT results.

Conclusions

1)The autoimmune variant of thyrotoxicosis due to Graves' disease requires the appointment of higher ^{131}I

activities in comparison with functional autonomy against the background of MNTG.

2)The main predictors of long-term RIT results are the TR volume for both thyrotoxicosis variants and the level of antibodies to the thyroid stimulating hormone receptor in thyrotoxicosis of autoimmune origin caused by Graves' disease.

References

1.Abramova N.A., Fadeev V.V. Conservative treatment of Graves' disease: principles, markers of relapse and remission // Problems of endocrinology, – 2005, - V.5l, № 6, P.44-48

2.Fadeev V.V et al. Long-term results of treatment of toxic goiter with radioactive iodine // Problems of Endocrinology, - 2005, - V. 51, №1, - P. 6.

3.Masalova N.N., Zakharenko R.V. The effectiveness of radioiodine therapy of thyrotoxicosis by a two-stage course using standard activity ^{131}I // Far-Eastern Medical Journal. – 2010. - №3 – P.87-89.

4.Tsyb A.F., Dreval A.V., et al. Radioiodine therapy of thyrotoxicosis: guide – M.: GEOTAR – Media, 2009. – p 152 – 154.

5.Alexander E., Larsen P.R. High dose ^{131}I therapy for the treatment of hyperthyroidism caused by Graves' disease // J. Clin. Endocrinol. Metab. – 2002. – V. 87 – P. 1073-1077/

6.Farrar J. J. Iodine-treatment of hyperthyroidism: current issues / J/. J. Farrar, A. D. Toft // J. Clin. Endocrinol. Metab. – 2003. – V.35. – P.207-212

УДК 610.514-006.363+616.30
ГРНТИ 76.29.48.48 (акушерство и гинекология)

ОСОБЕННОСТИ ФУНКЦИОНАЛЬНОГО СОСТОЯНИЯ ПЕЧЕНИ У БЕРЕМЕННЫХ С ФИБРОМИОМОЙ МАТКИ

Трубникова И.О. Яковлева, Э.Б.
ГОСУДАРСТВЕННАЯ ОБРАЗОВАТЕЛЬНАЯ ОРГАНИЗАЦИЯ ВЫСШЕГО ПРОФЕССИОНАЛЬНОГО ОБРАЗОВАНИЯ «ДОНЕЦКИЙ НАЦИОНАЛЬНЫЙ МЕДИЦИНСКИЙ УНИВЕРСИТЕТ ИМЕНИ М. ГОРЬКОГО», 283003, г. Донецк, проспект Ильича, 16
Кафедра акушерства, гинекологии, перинатологии, детской и подростковой гинекологии ФИПО, 283048 г. Донецк, ул. Панфилова, 3

UDC 610.514-006.363+616.30
GRNTI 76.29.48.48 (obstetrics and gynecology)

FEATURES OF THE FUNCTIONAL STATE OF THE LIVER IN PREGNANT WOMEN WITH UTERINE FIBROMYOMA

Trubnikova I.O., Yakovleva E.B.
STATE EDUCATIONAL ORGANIZATION OF HIGHER PROFESSIONAL EDUCATION "M. GORKY DONETSK NATIONAL MEDICAL UNIVERSITY", 16 Ilyich Avenue, Donetsk, 283003
Department of Obstetrics, Gynecology, Perinatology, Pediatric and Adolescent Gynecology, FIPO, 283048 Donetsk, Panfilova str., 3
DOI: 10.31618/ESU.2413-9335.2022.4.95.1623

АННОТАЦИЯ

Настоящее исследование направлено на изучение особенности функционального состояния печени у больных с фибромиомой матки. Под наблюдением находилось 64 женщины в возрасте 35–38 лет с нарушенной функцией печени и фибромиомой матки и 20 условно здоровых женщин. Исследование выполнялось на оборудовании: Abbott (США), *Beckman Coulter* (США), Hitachi (Япония). При изучении пигментной функции печени выявлено повышенное содержание билирубина в основной группе (23,5 ± 1,0 мкмоль/л) в сравнении с группой контроля (18,3 ± 1,1 мкмоль/л). Отмечалось снижение общего белка до 60,2±2,4 г/л в основной группе, в сравнении со здоровыми женщинами 71,4±1,3 г/л. В белковой формуле сыворотка крови диспротеинемия выражается в снижении альбумина до и повышении глобулина. В ходе исследования, полученные данные указывают на изменение функции печени при фибромиоме матки, поэтому следует необходимость рекомендовать специальное лечение, направленное на восстановление функции печени.

ABSTRACT

The present study is aimed at studying the features of the functional state of the liver in patients with uterine fibromyoma. 64 women aged 35–38 years with impaired liver function and uterine fibromyoma and 20 conditionally healthy women were under observation. The study was performed on equipment: Abbott (USA), Beckman Coulter (USA), Hitachi (Japan). The study of liver pigment function revealed an increased bilirubin