

Assessment of timeliness of the Graves' ophthalmopathy complex treatment

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Summary. The authors have carried out a retrospective analysis of the dissatisfaction causes of the results of complex treatment of patients with endocrine ophthalmopathy between 2012-2014. Evaluation of dissatisfaction of the endocrine ophthalmopathy treatment results was conducted depending on the activity and severity of process, terms of the ophthalmic symptoms' appearance before treatment. Ophthalmologic examination of Graves' ophthalmopathy patients in the early terms after diagnosis helps the proper establishment of the severity and activity of the process, allowing to define indications for a conservative treatment in time, reducing clinical manifestations and increasing satisfaction with treatment results.

Keywords: endocrine ophthalmopathy, treatment.

Treatment of endocrine ophthalmopathy (EOP) is an actual problem of the modern medicine. First of all, this is due to the fact that the disease is characterized by a mild course and spontaneous remission in most cases, which is often ignored both by the patient and the doctor; however, a persistent, irreversible visual decrease developed in 2-3% cases, that is not only medical but also a social significant problem [1, 2].

In addition, endocrine ophthalmopathy (Graves' ophthalmopathy) is a multifactorial disease requiring a complex and timely treatment, which is simultaneously directed to eliminate the risk factors of the development and progression of this pathological state, that is, first of all, a thyroid status normalization and immune status correction as is

substantiated pathogenetically [3, 4]. Taking into consideration the need for such an interdisciplinary approach, that is the combined participation of the endocrinologist and ophthalmologist in treating endocrine ophthalmopathy (EOP), the medical care being at an insufficient level for these patients, requiring a detailed research, developing common methods and optimal strategy of treatment.

The **purpose** of this study was to analyze the reasons of dissatisfactory results of complex treatment of endocrine ophthalmopathy.

Materials and methods

A retrospective analysis was conducted, of medical records of 49 patients (98 eyes) with clinical signs of EOP who visited the Eye Diseases Department of State Institution «Zaporizhzhya Medical Academy of Postgraduate Education» (ZMAPO),

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Ministry of Public Health of Ukraine between 2012-2014. As well as the independent patients' visits related to their dissatisfaction by the pathological condition and purposeful patients' visits for developing an optimal treatment strategy in every individual case were noted.

The patients' age ranged from 26 to 68 years, including 23 men and 26 women.

The complex treatment included a thyroid status normalization (medicamentous or surgical methods), that was conducted by the endocrinologist or surgeon-endocrinologist, and the treatment of the EOP ocular symptoms using of the steroid pulse therapy in the active phase [5] and symptomatic medicamentous treatment in the inactive phase.

Visometry, perimetry, tonometry, exophthalmometry, the palpebral fissure size measurements, degree of the eyelid retraction, biomicroscopy, and ophthalmoscopy were included in the ophthalmic examination.

All patients were examined to establish the degree of EOP severity according to EUGOGO classification [6]. Assessment of EOP activity is based on clinical signs of inflammation by the clinical activity scale (CAS) [6].

To determine the reasons of dissatisfaction with the results of EOP complex treatment, the following criteria were used: activity and severity of the process, time periods of the patient visits from the beginning of ocular symptoms appearance.

Results and discussion

Considering the defined criteria of our study, all patients were divided into two examined groups. The first group consisted of 22 patients with EOP at active stage, the second group comprised 27 patients with inactive stage of the process. The structure of patients' distribution according to the severity stage and the clinical characteristics is presented in **Tables 1, 2**.

The analysis showed the prevalence of moderate severity (81.8%) in patients under follow-up with

Table 2. Characteristics of clinical signs of EOP

Sign	Inactive form,	Active form,
	n=27	n=22
Subjective signs		
Lacrimation/Tearing	7 (25,9%)	9 (40,9%)*
Photophobia	-	7 (31,8%)*
Grittiness	18 (66,7%)	22 (100%)*
Eyelid Swelling	6 (22,2%)	22 (100%)*
Eyes Reddening	7 (25,9%)	22 (100%)*
Diplopia	9 (33,3%)	8 (36,4%)
Objective signs		
Visual Acuity	0,95±0,06	0,92±0,08
Intraocular Pressure (mmHg)	20,4±0,1	21,8±0,4
CAS Activity (points)	0,81±0,1	3,9±0,2*
Palpebral Fissure Width (mm)	11,6±0,5	12,3±0,5
Superior Eyelid Retraction (mm)	1,9±0,1	2,1±0,3
Inferior Eyelid Retraction (mm)	0,7±0,2	0,7±0,2
Exophthalmometry (mm)	22,5±1,3	23,7±0,4*
Lagophthalmos (mm)	1,1±0,1	1,3±0,3

Note: * $p \leq 0.05$ in comparison with the main group.

EOP in the active form, and isolated cases of mild (9.1%) or severe stages (9.1%) are noted in this pathology. At the same time, patients with mild stage (66.7%) were dominating in the inactive form, the remaining 33.3% consisting of patients with moderate severity.

Taking into consideration multifocal heterogeneity of patients' distribution by severity stage in two observed groups, the reasons for visiting Eyes Disease Department were analyzed. As it turned out, the majority of the 1st observed group, namely 15 persons (68.2%), were self-addressed for consultation due to oculomotor muscles dysfunction, diplopia and presence of exophthalmos. Meanwhile, 10 patients (66.7%) were subjected to regular medical examination and followed up by the endocrinologist with diagnosed thyrotoxicosis, and 5 patients (33.3%) have visited an ophthalmologist for the first time, while thyroid dysfunction was found in the following additional examination. The remaining 7 patients (31.8%) were referred by specialists for specialized medical care, 5 patients of moderate severity among them, and severe stage of disease was revealed in two patients.

Patients with inactive EOP stage did not seek for consultation independently, they were referred by specialists. So long as all patients were subjected to regular medical dispensary observation at the endocrinologist, a normalization of thyroid status was noted (20 patients used medicamentous drugs, 7 patients were subjected to total strumectomy fol-

Table 1. Distribution of patients according to EOP severity

Severity	Number of patients	
	1st group	2nd group
Mild	2 (9,1)	18 (66,7%)
Moderate	18 (81,8)	9 (33,3)
Severe	2 (9,1)	0
In all	22	27

Оригінальні дослідження

lowed by replacement therapy). Among the main complaints of the majority of patients, who were referred to ophthalmologist, grittiness, eyes reddening, moderate lacrimation / epiphora / tearing were prevailing in 18 subjects (66.7%). The purpose of consultations in the remaining 9 patients (33.3%) was the decision to eliminate the issue of cosmetic defects (strabismus, exophthalmos, palpebral fissure asymmetry).

A study of terms from appearance of EOP eye symptoms to referring to an ophthalmologist was conducted later. It was found that all patients of the first observed group were examined by an ophthalmologist for a period of one week to 6 months, the average of 2.4 ± 0.8 months. In spite of presence of an active process signs and evident EOP ocular implications, the patients of 1st group received a specialized ophthalmologic care in different periods of time, due to the lack of unified multidisciplinary approaches to the treatment of this disease. Thus, 5 patients, consulting primarily with ocular symptoms to the doctor, without endocrinological diagnosis, were examined in time and in the earliest period from one week to one month. The other remaining 10 patients, who were also self-addressed to the ophthalmologist because of dissatisfaction with the organ of vision condition, but were examined by the endocrinologist and received basic therapy, were examined also in time, but much later in the period from 1 to 3 months. Specialized consultation of ophthalmologist was performed in 7 patients in the period from 3 to 6 months in accordance with endocrinologist appointment.

The patients of the 2nd observed group, who were referred by the endocrinologist to a specialized consultation, were examined only within a period 9 to 12 months, after reaching a steady euthyroidism condition.

Taking into account the used ophthalmologic treatment and terms of patients' follow-up visits, we established that only for the first observed group it was reasonable to provide pathogenetically substantiated conservative specialized treatment (steroid pulse therapy), which resulted in a decrease of clinical signs of EOP and improving quality of life in 20 patients (90.9%). While the conservative treatment was used only as symptomatic therapy, directed to symptom expression elimination of dry eye syndrome in all patients of the second observed group, in other cases in 9 patients (33.3%) phase surgery was required, directed to eliminating the is-

sue of cosmetic defects and kept being dissatisfied with quality of life in these patients.

Conclusions

1. Increase in satisfaction with the results of treating EOP patients depends on the coordinated teamwork of the endocrinologist and ophthalmologist.
2. Early periods of ophthalmologic examination of patients with EOP for evaluating severity stage and process activity allow to timely determine indications for a pathogenetically justified conservative treatment of these patients, thereby to reduce the clinical signs and to increase satisfaction with the results of treatment.
3. The treatment of active manifestations of EOP should be carried out in parallel with the thyroid status correction that reduces the amount of irreversible persistent ocular symptoms (exophthalmos, diplopia, strabismus, lagophthalmos).

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Оцінка вчасності комплексного лікування хворих на офтальмопатію Грейвса

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Резюме. Проведено ретроспективний аналіз причин незадовільних результатів комплексного лікування хворих на ендокринну офтальмопатію (ЕОП) за 2012-2014 рр. Оцінку проводили залежно від активності та ступеня захворювання, термінів від появи очних симптомів до звертання пацієнтів по медичну допомогу. Раннє офтальмологічне обстеження пацієнтів з ЕОП із метою оцінки ступеня захворювання та активності процесу дозволяє вчасно встановити показання для проведення патогенетично орієнтованого консервативного лікування хворих і тим самим зменшити клінічні прояви та підвищити результативність лікування.

Ключові слова: ендокринна офтальмопатія, лікування.

Оценка своевременности комплексного лечения больных с офтальмопатией Грейвса

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Резюме. Проведен ретроспективний аналіз причин неудовлетворительных результатов комплексного лечения больных с эндокринной офтальмопатией (ЭОП) за 2012-2014 гг. Оценку проводили в зависимости от активности и тяжести процесса, сроков возникновения глазных симптомов до обращения пациентов к врачу. Офтальмологическое обследование пациентов с ЭОП Грейвса в ранние сроки после установления диагноза способствует правильному установлению степени тяжести и активности процесса, что позволяет своевременно определить показания для проведения патогенетически обоснованного консервативного лечения, уменьшить клинические проявления и повысить результативность лечения.

Ключевые слова: эндокринная офтальмопатия, лечение.