

Eurasian Medical
Research Periodical

Assessment of the Impact Of Hormonal Correction of Subclinical Hypothyroidism in Migraine on Patients' Quality of Life and Daily Work Activity

Saidvaliev F.S.

Tashkent Medical Academy

Sa'dinova G.U.

Tashkent Medical Academy

Sa'dinova D.U.

Tashkent Medical Academy

ABSTRACT

Migraine is a common disease, accounting for one-third of all neurological diseases [6]. About 90% of people with migraines are bothered by moderate to severe headaches. Migraine is diagnosed in 90% of patients who present with a headache for the first time [3]. Three-quarters of patients experience a decrease in daily activity during a headache attack, and one-third require a bed rest [7]. Several clinical and epidemiological studies have reported that migraine is a topical disease due to the low effectiveness of migraine treatment [1, 2, 4, 5].

Keywords:

Migraine, hormonal correction

Objective: To assess the impact of hormonal correction of subclinical hypothyroidism in migraine on patients' quality of life and daily activities

Methods.

A total of 94 patients with migraine and subclinical hypothyroidism were selected for the study. The diagnosis of migraine was made according to the International Organization for Headache Diagnostic Criteria 2013 (ICHD-3). All patients underwent clinical-neurological, instrumental (MRI), hormonal (TTG, free T4) examinations and endocrinologist examination. All patients were recommended standard migraine treatments after the initial examination. Of the patients with subclinical hypothyroidism (94), 53 were added levothyroxine (50–100 mg) to the treatment plan as recommended by the endocrinologist, and 41 were monitored, and levothyroxine was not recommended. According to the difference in treatment, patients were distributed as follows.

The total number of patients was 94 (100%).

Group 1: 53 (56%) - patients receiving levothyroxine (50-100 mg)

Group 2: 41 (44%) patients who did not receive levothyroxine.

All patients were monitored. After 3 months, the patients were re-examined.

The diagnostic kit consists of:

- Collection of complaints and anamnestic data
- Determine the average amount and duration of headache per month
- Clinical and neurological examinations
- Endocrinologist consultation
- MRI of the brain
- MIDAS scale for assessing the limitations of daily activities
- QVM scale for assessing quality of life in patients

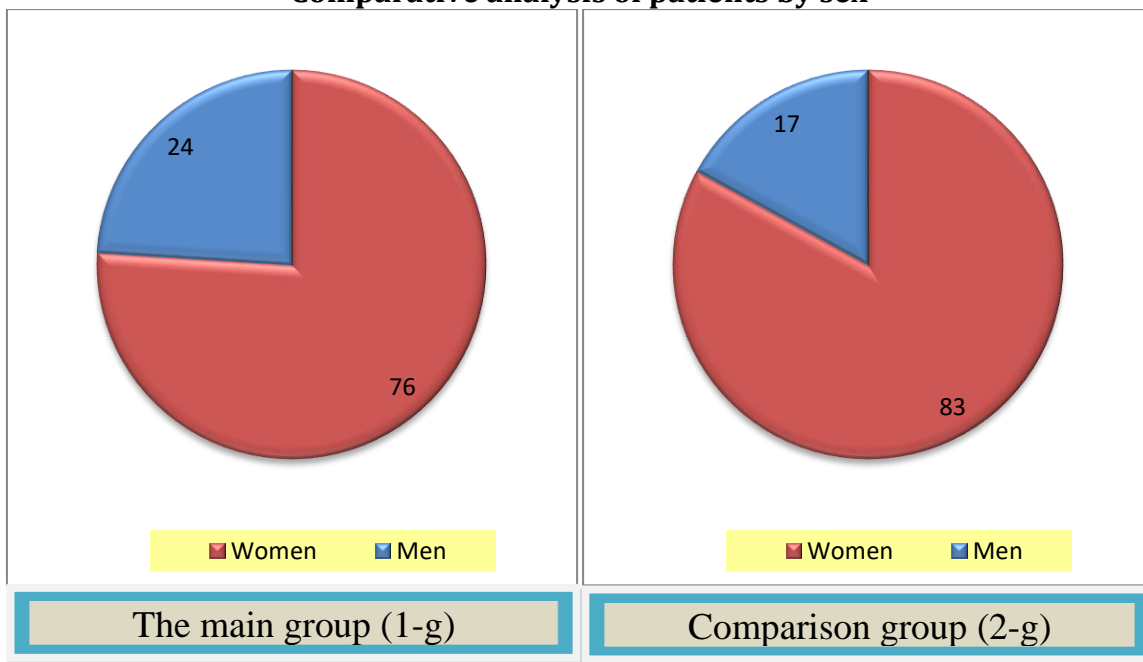
Research results:

When the gender distribution of patients in the groups was compared, women predominated in both groups of

patients (Figure 1). The mean age of the patients was 35.6 ± 9.8 in the main group and 34.3 ± 7.5 in the specific group. The

distribution of patients by age is shown in Figure 1

Figure 1
Comparative analysis of patients by sex



Comparative analysis of initial and post-treatment re-examination results in patients

Using a questionnaire for a comparative analysis of the clinical course of migraine in patients, the monthly amount and duration of initial (1-day) and post-treatment (3-month) headache were determined (see Table 1). As shown in the table, the monthly amount and duration of headache in both groups after treatment decreased statistically significantly compared to the initial study. The monthly amount and duration of headache were statistically significantly lower in patients receiving levothyroxine than in patients not receiving levothyroxine ($p < 0.05$). No headache was observed in 79% of patients in group 1 (42 people) and in 36% (15 people) of patients in group 2. Headaches of varying intensity were observed in 11 (21%) of patients receiving levothyroxine and in 26 (64%) patients in the comparable group. The mean monthly mean headache headache in patients receiving levothyroxine in the main

group was 21.5 ± 4.2 , and 2.7 ± 1.5 after treatment. The mean monthly mean headache rate in patients in the comparison group was as follows: 8.64 ± 2.8 after the first 19.4 ± 5.3 treatments. The mean duration of headache was averaged 10.3 ± 3.6 hours initially in the main group and 2.68 ± 1.2 hours after treatment. The comparison group recorded an average of 12.2 ± 4.6 hours at first and 5.7 ± 3.4 hours at follow-up after treatment. According to the results of our study, the average monthly amount of headache in patients receiving levothyroxine was 4 times lower than in patients not receiving levothyroxine, and the mean duration was 2 times lower ($p < 0.05$). Based on these data, we can conclude that levothyroxine intake in subclinical hypothyroidism significantly reduces the number and duration of headaches

Table 1
Comparative monthly amount and duration of headache after treatment

Indicators	Preliminary examination		Review (After 3 months)	
	1- group	2- group	1- group	2- group
The average amount of headaches a month	21,5±4,2	19,4±5,3	2,7±1,5	8,64±2,8
Average duration of headache (hours)	10,3±3,6	12,2±4,6	2,68±1,2	5,7±3,4

Note: * p<0,05

Assessment of quality of life in patients

According to the results of the assessment of patients' quality of life in the QVM survey, the initial examination revealed a decrease in quality of life in all patients in both groups. In patients receiving levothyroxine in the main group (n = 53), the mean score was 49.3 ± 11.6 according to the QVM survey, and in the comparison group (n = 41) it was 52.5 ± 11.5 points (1-100). Re-examination of patients after 3 months showed an improvement in

quality of life in both groups of patients: in group 1 (n = 53) according to the survey, the average score was 91.3 ± 8.6 points, in group 2 (n = 41) 72.5 ± 12.4. Patients receiving levothyroxine showed a 22% greater improvement in quality of life than patients who did not receive levothyroxine (p <0.05). The results of the comparison of quality of life indicators are given in Table 2.

Table 2
Results of comparison of quality of life in patients according to the QVM survey

Indicators	The main group (n=53)	Comparison group (n=41)	P indicator
Preliminary examination	49,3±11,6	52,5±11,5	
Review	91,3±8,6	72,5±12,4	p<0,05

Evaluation of daily activity decline in patients

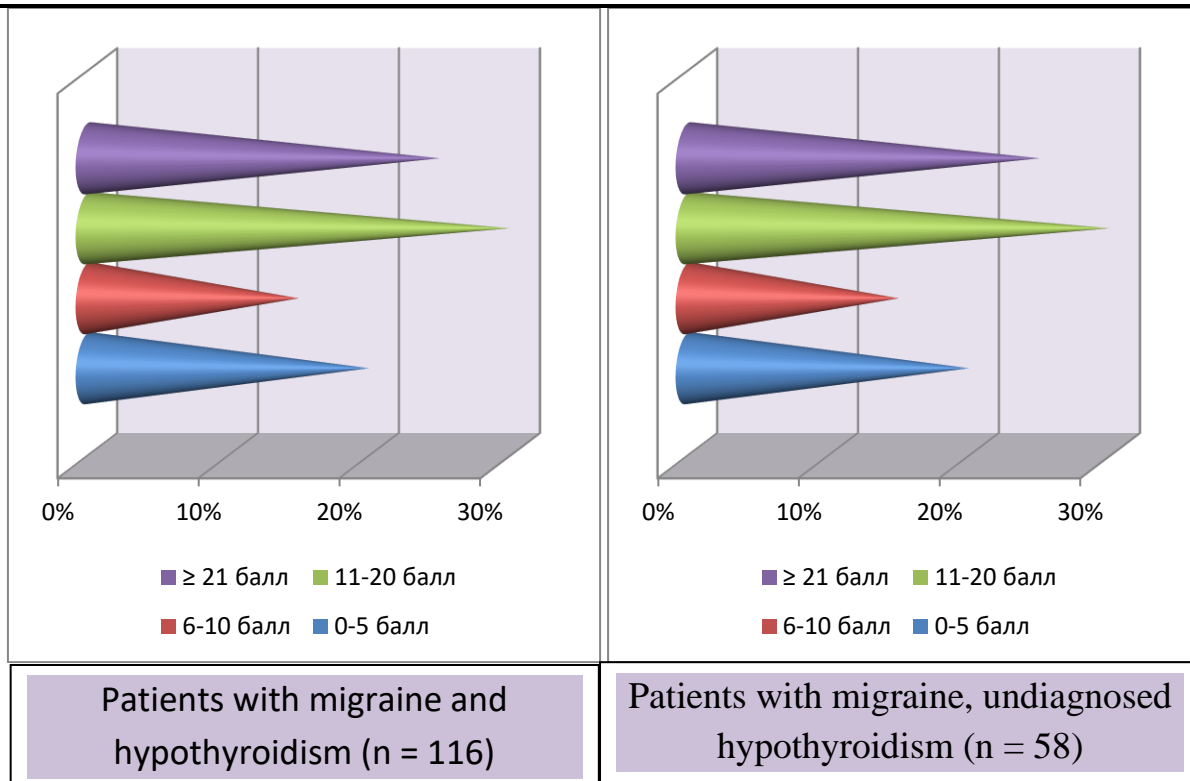
According to the results of the MIDAS scale, daily activity limitation was found in all patients in both groups. At the initial examination, a moderate to severe decrease in daily activity was noted in the main group of patients (n = 53): an average of 20.7 ± 11.5 points. In the comparison group patients (n = 41), almost the same result was recorded as in the main group patients: 18.9 ± 10.7 points.

Comparing the results of the re-examination after 3 months, it was found that the daily performance of patients in the main group improved statistically significantly compared to patients in the comparable group (p <0.05). The following numbers were recorded on the scale: the main group (n = 53) 8.5 ± 6.5 points, the comparative group (n = 41) 16.2 ± 7.3 points (see Table 4.6). These figures suggest that levothyroxine intake results in a 50% more recovery in daily performance.

3- table
MIDAS scale comparison results

Indicators	The main group (n=53)	Comparison group (n=41)	P indicator
Preliminary examination	20,7±11,5	18,9±10,7	
Review	8,5±6,5	16,2±7,3	p<0,05

Comparative results of the MIDAS scale in patients



Note: 0–5 points (very small decrease in daily activities)
 6–10 points (low daily activities)
 11–20 points (moderate limitation of daily activities)
 ≥ 21 points (severe limitation of daily activities)

Conclusion

According to the results of our study, the addition of levothyroxine (based on the examination of an endocrinologist) to the main treatment in cases of migraine and subclinical hypothyroidism comorbid relieves migraine course. However, it has a significant impact on the further improvement of patients' quality of life and daily performance.

References.

1. Adams AM, Serrano D, Buse DC, Reed ML, Marske V, Fanning KM, et al. The impact of chronic migraine: the chronic migraine epidemiology and outcomes (CaMEO) study methods and baseline results. *Cephalalgia*. 2015; 35(7):563–78.
2. Bagley CL, Rendas-Baum R, Maglante GA, Yang M, Varon SF, Lee J, et al. Validating migraine-specific quality of life questionnaire v2.1 in episodic and chronic migraine. *Headache*. 2012;52(3):409–21.
3. Ferrari MD. The economic burden of migraine to society. *Pharmacoeconomics*. 1998;13:667–76.
4. Stewart WF, Lipton RB, Simon D. Work-related disability: results from the American migraine study. *Cephalalgia*. 1996;16:231–8.
4. Lipton RB, Hamelsky SW, Kolodner KB, Steiner TJ, Stewart WF. Migraine, quality of life, and depression: a population-based case-control study. *Neurology*. 2000;55:629–35.
5. Leonardi M, Raggi A, Bussone G, D'Amico D. Health-related quality of life, disability and severity of disease in patients with migraine attending to a specialty headache center. *Headache*. 2010;50:1576–86.
6. Murray CJ, Vos T, Lozano R, Naghavi M, Flaxman AD, Michaud C, et al. Disability-adjusted life years (DALYs) for 291

- diseases and injuries in 21 regions, 1990–2010: a systematic analysis for the global burden of disease study. *Lancet*. 2013;380:2197–223.
7. Tepper SJ, Dahlof CG, Dowson A, Newman L, Mansbach H, Jones M, et al. Prevalence and diagnosis of migraine in patients consulting their physician with a complaint of headache: data from the Landmark Study. *Headache* 2004;44(9):856-64.