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DISTRIBUTION OF LEISHMANIASIS IN THE OLD WORLD AND ANALYSIS OF PATIENTS WITH LEISHMANIASIS

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Abstract:The area of distribution of leishmaniasis is determined by the distribution of its nosogeographical forms, these being determined by the composition of the parasitic system (parasite-vector-host) and by environmental conditions. There are three distinct nosogeographical forms of visceral leishmaniasis in the Old World (Mediterranean-Middle Asian, Indian, and East African forms). In the Mediterranean-Middle Asian subzone there are three types offocus: natural, semi-synanthropic, and synanthropic. This situation reflects the evolution of visceral leishmaniasis from a zoonosis to an anthroponosis.Indian kala azar is a true anthroponosis. There are two geographical forms of cutaneous leishmaniasis in the Old World: a zoonotic form and an anthroponotic form. Natural foci of zoonotic cutaneous leishmaniasis are located mainly in the deserts of Middle Asia. Foci of anthroponotic cutaneous leishmaniasis have developed mainly in those areas where

zoonotic cutaneous leishmaniasis does not occur[4,5].

Key words: visceral leishmaniasis, zoonosis, anthroponosis

Аннотация: Ареал распространения лейшманиоза определяется распространением его нозогеографических форм, которые определяются составом паразитарной системы (паразит-переносчик-хозяин) и условиями окружающей среды. В Старом Свете различают три нозогеографические формы висцерального лейшманиоза (средиземноморско-среднеазиатская, индийская и восточноафриканская). В средиземноморско-среднеазиатской подзоне выделяют три типа очагов: природные, полусинантропные и синантропные. Такая ситуация отражает эволюцию висцерального лейшманиоза от зооноза к антропонозу. Индийский кала-азар является истинным антропонозом. В Старом Свете различают две географические формы кожного лейшманиоза: зоонозную и антропонозную. Природные очаги зоонозного кожного лейшманиоза расположены в основном в пустынях Средней Азии. Очаги антропонозного кожного лейшманиоза развились в основном на тех территориях, где зоонозный кожный лейшманиоз не встречается.

Ключевые слова: висцеральный лейшманиоз, зооноз, антропоноз.

Research methods used: In developing countries where the disease is not prevalent, the existence of laboratory facilities enables an adequate and efficient follow-up of the disease. However, in developing countries with large numbers of patients in rural areas, simple diagnostic tools are necessary for field use. Laboratory diagnosis of CL includes microscopic observation and Microscopic examination, and DNA sequencing of cutaneous leishmaniasis, and biochemical examination of blood samples from patients with leishmaniasis were performed [1,2].

Research results: A molecular biological study was conducted to determine the genotype of Leishmania. After DNA extraction from positive preparations, PCR was performed in two stages. The first stage of PCR (ITS) detected the activity of the Leishmania gene in all 23 samples. For the PCR (RFLP) run, we had specific primers for three Leishmania species (L. major, L. tropica and L. infantum). According to RFLP1, 6 (69.6%) samples were identified as L. major. We did not identify the remaining 7 (30.4%) samples, because they did not match any of the primers we had. Perhaps, in this rodent population, we encountered L. turanica - leishmania, which is endemic and only epizootically acquired. Thus, 16 (21%) of the total number of rodents we caught, or 27.1% of the large sand voles, turned out to be carriers of L. major.

Conclusion: The presence of the mosquito-borne Ph. sergenti in settlements poses a risk of spreading the causative agent of anthroponotic cutaneous leishmaniasis among the non-immune population if L. tropica is introduced from endemic regions.

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THE EFFECTIVENESS OF COMPLEX TREATMENT IN MIGRAINE DISEASE

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Annotation: This article examines in detail the synergistic effect, clinical efficacy, and role in improving the overall health of patients through the combined use of medications and acupuncture. Based on the results of scientific research, the advantages, limitations, and place of this combined approach in practical medicine are highlighted. The findings of this study will help shape innovative and comprehensive approaches to migraine treatment.

Key words:Migraine, medications, acupuncture, combination therapy, synergistic effect, neurological disorders, traditional medicine, quality of life, alternative treatment.

Introduction. Migraine is recognized worldwide as one of the most common neurological disorders that significantly impacts the quality of life [1]. This condition not only causes physical discomfort but also adversely affects patients' mental state, daily activities, and work productivity [3]. The primary symptoms of migraine, including intense and recurrent headaches, nausea, vomiting, and sensitivity to light and sound, often disrupt patients' normal way of life [1]. According to statistical data, migraine predominantly affects individuals of working age, particularly women [5]. To date, medications play a crucial role in migraine treatment. They aim to alleviate symptoms and reduce the frequency of attacks, utilizing both preventive and symptomatic drugs [2]. However, many patients seek alternative methods due to side effects of medications, challenges associated with long-term use, or sometimes their limited efficacy [4]. From this perspective, traditional medical approaches, including acupuncture, have gained considerable attention in addressing modern neurological problems [7]. Acupuncture, originating from ancient Chinese medicine, involves stimulating biological active points on the body using needles to treat various conditions [6]. In recent years, there has been growing interest in combining traditional

medications with acupuncture. The primary goal of this approach is to leverage the synergistic (mutually enhancing) effects of both methods to alleviate symptoms and reduce the frequency and duration of migraine attacks [8].

Research objective: To evaluate the efficacy of combining medications and acupuncture in migraine treatment and analyze the advantages of this integrated approach.

Materials and methods. This study aimed to evaluate the efficacy of combining traditional medications and acupuncture in the treatment of migraine. It involved 30 patients aged 18 to 55 years diagnosed with migraine at the Neurology Department of the Tashkent Medical Academy's multidisciplinary clinic. Patients were voluntarily divided into two groups:

1. Main group – 15 patients treated with a combination of acupuncture and traditional medications.

2. Control group – 15 patients treated with traditional medications only.

The following methods were used in the study:

1. Diagnostic and evaluation methods

Migraine diagnosis: The diagnosis of migraine was established based on the International Classification of Headache Disorders (ICHD-3). The type, duration, and frequency of headaches, as well as associated symptoms (e.g., nausea, light, and sound sensitivity), were identified through patient-completed questionnaires and clinical examination.

Subjective pain assessment: Pain intensity was assessed using the Visual Analog Scale (VAS), where patients rated their headache severity on a scale from 0 (no pain) to 10 (worst pain imaginable).

Quality of life and impact on activities: The MIDAS (Migraine Disability Assessment) scale was used to measure the impact of migraine on daily activities and quality of life. This scale evaluated difficulties in work productivity, social activities, and household tasks due to the condition.

Treatment response: The effectiveness of treatment was assessed before and after therapy based on the changes in symptoms and quality of life.

2. Treatment protocol

Traditional medications: Patients in the medication-only group were prescribed migraine management drugs such as triptans (sumatriptan, zolmitriptan), nonsteroidal anti-inflammatory drugs (ibuprofen, naproxen), beta-blockers (propranolol), anticonvulsants (topiramate), and analgesics (paracetamol). Medications were tailored individually for each patient.

Acupuncture therapy: Acupuncture sessions were administered over 10 weeks, 2–3 times per week. Each session lasted 30–40 minutes, targeting biological active points on the body with needles. Acupuncture points were individually selected and adjusted based on the patient's condition and symptoms.

3. Outcome evaluation criteria

Frequency of migraine attacks: The number and duration of migraine attacks were recorded. Each patient maintained a headache diary to document their symptoms.

Pain intensity: The severity and duration of pain were assessed before and after each session using the VAS.

Quality of life and activity impact: The MIDAS scale was employed to measure the effect of migraine on daily activities and quality of life.

Overall patient condition: The patients' responses to medications and acupuncture sessions, as well as their medication consumption, were recorded.

4. Statistical analysis

The study results were analyzed using the Statistical Package for the Social Sciences (SPSS) software. The differences between groups were assessed using the Student's t-test and Chi-square test. A significance level of $p<0.05$ was considered statistically significant. All results were subjected to two-sided analysis, and clear statistical indicators were developed for comparison.

Results. This study assessed the efficacy of combining traditional medications and acupuncture in the treatment of migraines. The results were obtained by comparing the condition of patients in the two groups. The outcomes were evaluated based on the following key indicators:

1. Frequency and duration of migraine attacks

Main group (medications + acupuncture):

In the main group, the frequency of migraine attacks before treatment averaged 10–12 times per month. As a result of the combination of acupuncture and medications, the frequency of attacks decreased by 30% during the first 4 weeks and by 70% by the end of the treatment, averaging 3–4 times per month. The duration of attacks also decreased, with an average duration of 12–16 hours before treatment, reducing to 5–7 hours after treatment.

Control group (medications only):

In the control group, the use of medications resulted in a significant but less pronounced effect. The frequency of attacks decreased by 40%, with attacks still occurring an

average of 7–8 times per month. The duration of attacks decreased to approximately 10–12 hours.

2. Pain intensity (VAS Scale)

Main group:

The combination of acupuncture and medications significantly reduced the intensity of pain. Before treatment, the average pain intensity was 8.2 points on a 10-point scale. By the end of the treatment, this score decreased to 3.1 points, representing a 62% reduction in pain intensity.

Control group:

In the control group, pain intensity also decreased but to a lesser extent. Before treatment, the average intensity was 8.0 points, which reduced to 5.2 points after treatment, representing a 35% reduction.

3. Quality of Life and Impact on Activities (MIDAS Scale)

Main group:

Patients in the main group showed significant improvement in quality of life. The MIDAS scale score, which reflects the impact of migraines on daily activities, decreased by 60%. Patients reported notable improvements in work productivity, social life, and reduced limitations caused by the condition. The average score decreased from 22.5 to 9.0 points.

Control group:

In the control group, the MIDAS score decreased by 40%. While some improvements in work and social activities were observed, the overall impact on quality of life remained less significant, with the score decreasing from 22.5 to 13.5 points.

4. Pharmacotherapy

Main group:

With the addition of acupuncture, patients significantly reduced their use of medications by 50%. This demonstrated the effectiveness of acupuncture in reducing pain and preventing migraine attacks.

Control group:

Patients in the control group continued to rely heavily on medications, requiring an average of 5–6 different drugs.

5. Overall patient condition

Main group:

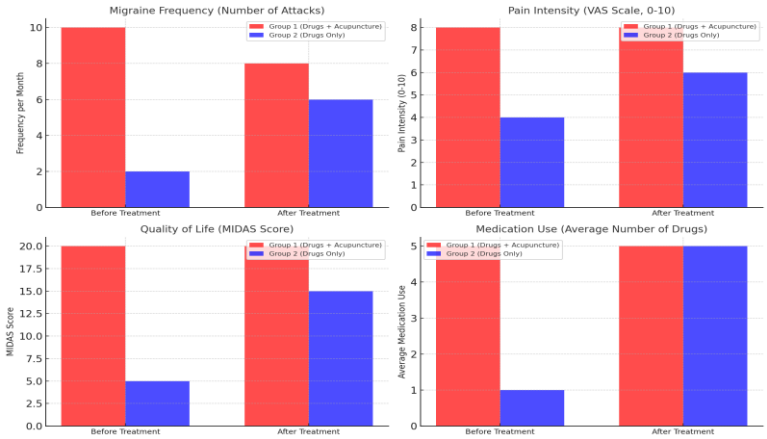
Patients in the main group experienced improvements in their overall condition and well-being, including psychological and physiological health. The combination of acupuncture and medications helped reduce stress, improve mood, and enhance energy levels and activity.

These results demonstrate that combining acupuncture with traditional medications provides a synergistic effect, leading to better outcomes in migraine treatment compared to medications alone.

Control group: The psychological and physical condition changes in the group that received only medications were less significant compared to the main group.

Statistical analysis results:

The statistical analysis of the study confirmed the significance of differences between the main group and the control group ($p < 0.05$). This demonstrates the effectiveness of combining acupuncture and traditional medications.



Discussion: The study confirmed that the combined use of acupuncture and traditional medications is an effective method for treating migraines. This combination significantly reduced the frequency and duration of headaches while improving the patients' quality of life. Positive changes in pain intensity and quality of life were more pronounced in the main group compared to the control group. This approach is crucial for reducing the side effects of medications and enhancing treatment efficacy.

Conclusion: The combined use of traditional medications and acupuncture in migraine treatment was found to be effective in reducing headaches and improving patients' quality of life. While medications provided quick pain relief, acupuncture helped alleviate long-term symptoms and reduce stress. This approach minimized the side effects of medications and made the treatment more effective. The results confirm the importance of integrating these methods in migraine management.

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