UDK: 616.37-002: 613.84

EFFICIENCY OF GANODERMA LUCIDIDUM EXTRACT AND MAGNETOTHERAPY IN THE TREATMENT OF PATIENTS WITH COLOR DYSBIOSIS


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ЙЎҒОН ИЧАК ДИСБИОЗИ БЎЛГАН БЕМОРЛАРНИ ДАВОЛАШДА ГАНОДЕРМА ЛЮЦИДУМ ЭКСТРАКТИ ВА МАГНИТОТЕРАПИЯНИНГ САМАРАСИ

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ЭФФЕКТИВНОСТЬ МАГНИТОТЕРАПИИ В КОМПЛЕКСЕ С ЭКСТРАТОМ ДРЕВЕСНОГО ГРИБА GANODERMA LUCIDUM В ЛЕЧЕНИИ БОЛЬНЫХ С ДИСБИОЗОМ КИШЕЧНИКА

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Резюме. *Йўғон ичак дисбиози билан оғриган 18 ёшдан 65 ёшгача бўлган 90 нафар бемор, жумладан 63 нафар аёл ва 27 нафар эркак. Тадқиқот мақсадларига мувофиқ, барча беморлар асосий клиник ва физиологик хусусиятлари бўйича таққосланадиган гуруҳларга бўлинган. Биринчи гуруҳ беморлари (30 киши) "Олимп-1" аппарати ёрдамида магнитотерапия муолажасидан ўтди. Таъсирни 4 жуфт индуктор - соленоидлар йўғон ичак органларининг проекцион майдонига ўтказди; Таъсир қилиш параметрлари: интенсивлиги - 30% - 100%, частотаси 10 Гц, магнит индукция қиймати - 5 мТ. Жараён ҳар куни 15-20 дақиқа давомида амалга оширилади. Даволаш курси-10-12 муолажа. Иккинчи гуруҳ беморлари (30 киши) комплекс даволашдан ўтдилар: юқоридаги усул бўйича МТ, шунингдек Ganoderma Lucidum экстрактидан ташкил топган синбиотик - кунига 1 капсуладан 2 махал овқат вақтида 21 кун давомида қабул қилинди. Учинчи таққослаш гуруҳида (30 та бемор), "Олимп-1" аппарати (плацебо) дан МТ таъсири тақлил қилинган. Даволаш курси 10-12 муолажадан иборат эди. Ganoderma Lucidum экстракти юқоридаги схема бўйича даволаш комплексига киритилган. Ўтказилган тадқиқотлар натижалари Ganoderma Lucidum экстракти таркибидаги МТ ва Ganoderma Lucidum экстрактини комплекс даволашининг патогенетик жиҳатдан асосли ва ИД билан оғриган беморларни даволашда самарали деб ҳисоблашга асос беради, бу эса ўрганилган беморлар контингентида дори-дармонсиз терапия воситаларининг арсеналини кенгайтиради ва реабилитация чора-тадбирларнинг самарадорлигини оширади.*

Калит сўзлар*: Йўгон ичак дисбиози, магнитотерапия, даволаш курси, реабилитация чора-тадбирлари, Ganoderma Lucidum экстракти.*

Abstract. *There were 90 patients aged from 18 to 65 years with colon dysbiosis, including 63 women and 27 men. In accordance with the objectives of the study, all patients were divided into comparable groups according to their main clinical and physiological characteristics. The first group of patients (30 people) underwent magnetotherapy using the device "Olympus-1". The effect was transmitted to the projection area of the colon organs by 4 pairs of inductors - solenoids; Exposure parameters: intensity - 30% - 100%, frequency 10 Gts, magnetic induction value - 5 mT. The process is done every day for 15-20 minutes. The course of treatment is 10-12 treatments. The second group of patients (30 people) underwent complex treatment: MT by the above method, as well as a synbiotic consisting of Ganoderma Lucidum extract - 1 capsule 2 times a day at meal time for 21 days. In the third comparison group (30 patients), the effect of MT from the Olympus-1 device (placebo) was analyzed. The course of treatment consisted of 10-12 treatments. Ganoderma Lucidum extract is included in the treatment complex according to the above scheme. Complex treatment of MT and Ganoderma Lucidum extract containing Ganoderma Lucidum extract is pathogenetically justified and effective in the treatment of patients with ID, which expands the arsenal of drug-free therapies in the studied patient contingent and increases the effectiveness of rehabilitation measures.*

Keywords*: colon dysbiosis, magnetotherapy, course of treatment, rehabilitation measures, Ganoderma Lucidum extract.*

Introduction. One of the components of the pathological symptom complex is the development of dysbiotic conditions, which is associated, among other things, with the wide and often unreasonable use of antibiotic therapy for various diseases. In the scientific literature there are data indicating a 100% combination of some diseases with intestinal dysbiosis (DC) (Strizhova N.V. et al., 2001; Pasman N.M. et al., 2006), which leads to the formation of a syndrome of mutual burden, and thus complicates the treatment of this category of patients. The experience of using synbiotics (SG) in gastroenterological practice is widely presented in the literature (Gusakova E.V., 2005; Efendieva M.T. et al., 2006; Ushkalova E.A., 2007; Gionchetti P. et. Al, 2006; McFarland LV, 2006). The results of recent studies give reason to consider the methods of physical therapy as one of the most promising, given the possibility of their differentiated and targeted impact on various links of the pathogenesis of the disease,an increase in the adaptive and reserve capabilities of the body with a minimum risk of developing side and allergic reactions (Strugatsky V.M. et al. , 1999; Razumov A.N., 2002).Various methods of physiotherapy are successfully used in gastroenterological practice. At the same time, the experience of using magnetotherapy in the treatment of intestinal diseases (Serdyuk V.V., 2004, Eremina A.A., 2007) is limited. The theoretical prerequisite for the use of magnetic therapy (MP) in patients with intestinal dysbiosis is the data of previous studies, indicating its beneficial effect on the state of the body's regulatory systems, an increase in adaptive reactions, an improvement in regional hemodynamics in patients with various pathologies (Bogolyubov V.M. etal., 1998; Berkutova AM et al., 2000), which is important in the treatment of this category of patients.

Purpose of the study: to study and scientifically substantiate the use of magnetotherapy in combination with synbiotics in the rehabilitation treatment of patients with intestinal dysbiosis.

Research methods: 90 patients with colonic dysbiosis, 63 women and 27 men, aged between 18-65 years, were studied.

Research methods: 90 patients aged 18-65 years with colon dysbiosis, including 63 women and 27 men.

In addition to general clinical studies, laboratory diagnosis of intestinal dysbiosis was performed by R.V. Eshpteynitvak and F.L. Using the method developed by Vilypanskaya (1970), endoscopic examination of the colon using the apparatus of Olympus, histological examination of the biopsy of the colonic mucosa, assessment of the state of the immune system using tests that provide quantitative indicators of cellular and humoral immunity: T- and V- lymphocytes, immunoglobulins of class G, A, M in peripheral blood (methods M. Jondal et al., 1972; I.Morettaetal., 1975; G.Mancini, 1965), assessment of psychological state using a computer version of a multivariate questionnaire for the study of personality. Questionnaire to study the person V.P. According to the Hare method (1981), the assessment of psychosomatic status (well-being, activity, mood) using an abbreviated multi-factor questionnaire test for personal examination. The data obtained were processed using variation statistical methods (modified by Fisher) by calculating the Student t-criterion using the Microsoft Excel (2007) software package on an IBM PC. When appropriate samples were available, the Student Difference Test was used. An alternative F-test was used to assess the difference in stocks (percentage change in the availability of the mark). Differences between mean values were considered reliable in R.

Methods of treatment. In accordance with the objectives of the study, all patients were divided into comparable groups according to their main clinical and physiological characteristics. The first group of patients (30 patients) were treated with Olympus-1 apparatus magnetic therapy (MT). The projection area of the colon organs was affected by 4 pairs of inductors - solenoids; exposure parameters: intensity - 30% - 100%, frequency 10 Gts, magnetic induction value - 5 mT. The process takes 15-20 minutes every day. The course of treatment is 10-12 treatments. The second group of patients (30 patients) underwent complex treatment: MT by the above method, as well as a synbiotic consisting of Ganoderma Lucidum extract - 1 capsule 2 times a day at meal time for 21 days.

In the third comparison group (30 patients), the effect of MT from the Olympus-1 device (placebo) was simulated. The course of treatment consisted of 10-12 treatments. Ganoderma Lucidum extract is included in the treatment according to the above scheme.

Methods of treatment. Treatment methods. In accordance with the objectives of the study, all patients were divided into groups comparable in terms of the main clinical and physiological characteristics. Patients of the first group (30 patients) were treated with magnetic therapy (MT) from the "Olymp-1" apparatus.

The impact was carried out by 4 pairs of inductors - solenoids on the area of projection of the organs of the large intestine; exposure parameters: intensity - 30% - 100%, frequency 10 Hz, magnetic induction value - 5 mT. The procedures were carried out daily, lasting 15-20 minutes. The course of treatment is 10-12 procedures. Patients of the second group (30 patients) underwent complex treatment: MT according to the above method, as well as a synbiotic consisting of an extract of Ganoderma Lucidum - 1 capsule 2 times a day with meals for 21 days n the third comparison group (30 patients), the effect of MT from the

“Olymp-1” apparatus (placebo) was imitated. The course of treatment consisted of 10-12 procedures. Ganoderma Lucidum extract was included in the treatment complex according to the above scheme.

The results of the conducted studies give grounds to regard the complex treatment of MT and synbiotics, consisting of Ganoderma Lucidum extract, as pathogenetically substantiated and effective in the treatment of patients with DC, which expands the arsenal of non-drug therapy means at various stages of therapeutic and restorative measures in the studied contingent of patients.

Keywords: Colon dysbiosis, treatment courses, rehabilitation measures, magnetotherapy, Ganoderma Lucidum extract.

Various methods of physiotherapy are successfully used in gastroenterological practice. However, the experience of using physiotherapy and folk remedies in the treatment of intestinal dysbiosis is very limited [4]. Preliminary research data show that the theoretical condition for the use of magnetic therapy (MT) in patients with intestinal dysbiosis is its beneficial effect on the state of the body's regulatory systems, increased adaptive responses, improvement of regional hemodynamics in patients with various pathologies and [2] has Ganoderma Lucidum mushroom extract has been used effectively in the treatment of a number of diseases of the gastrointestinal tract. Such scientific and practical research is still underway. Our research team examined the clinical effects of magnetic field and Ganoderma Lucidum extract in patients with intestinal dysbiosis. The aim of the study: to study and scientifically substantiate the use of magnetotherapy in combination with Ganoderma Lucidum extract in the rehabilitation of patients with intestinal dysbiosis.

The impact was carried out by 4 pairs of inductors - solenoids in the area of the projection of the organs of the large intestine; Exposure parameters: intensity - 30% - 100%, frequency 10 Hz, magnetic induction value - 5 mT. The procedure is carried out daily for 15-20 minutes. The course of treatment is 10-12 procedures. Patients of the second group (30 people) underwent complex treatment: MT according to the above method, as well as a synbiotic in the extract of Ganoderma Lucidum - 1 capsule 2 times a day with meals for 21 days.

In the third group of comparisons (30 patients) imitated the action of MT on the device "Olympus-1" (placebo). The course of treatment consisted of 10-12 procedures. Extract Ganoderma Lucidum was included in the treatment complex according to the above scheme.

Research results: Assessing the dynamics of pain syndrome, it should be noted the advantages of complex treatment: complete elimination of pain occurred in 83.3% (r <0.05) - 1-groups. In all patients with diarrhea, diarrhea was less common in groups 2 and 3 and did not change in group 3. There were also positive changes in the state of intestinal biocenosis, which was manifested by a significant improvement in the composition of anaerobic and aerobic components. In 83% of group 1 (r <0.05) bifidobacteria and lactobacilli increased to normal values. In the second group, the frequency of faeces led to normalization and a decrease in flatulence in 76.2% of cases (x2 = 11.9; r = 0.031 and x2 = 8.1; r = 0.048 and x2 = 9.5; r for the negative amine test. = 0.042 and x2 = 7.3; r = 0.053).

In topical application for therapeutic effect in patients with intestinal dysbiosis, great attention is paid to the results of rheovasography to improve regional blood circulation in the pathological center to a certain extent. Analysis of the dynamics of regional blood circulation revealed an improvement in blood circulation in the abdominal organs, which is mainly due to an increase in vascular circulation, restoration of vascular tone and a decrease in angiospasm in the vessels (table 1).

At the same time, the inclusion of Ganoderma Lucidum extract in the treatment complex helped to accelerate blood flow and improve blood circulation in venous vessels. In group 3 of patients, the rheography indices did not change significantly. That is, the mechanisms for implementing regional hemodynamic improvements were slightly different and more specific in Group 2.

Immune disorders play a central role in the pathogenesis of intestinal dysbiosis [4]. Therefore, attention was paid to the study of the mechanism of action of MT as a monotherapy method for local action, its effect on the state of the immunocompetent system, as well as its effect on synbiotics.

Analysis of the dynamics of the immune state showed the advantages of complex treatment. This was characterized by an improvement in the ratio of Tγ and Tμ due to the restoration of the balance of immunoregulatory T-cell subpopulations and clear differentiation of T-lymphocytes in the thymus, as well as a significant increase in their immunoregulatory index (R <0.05). In the study of immunological parameters of patients in groups 1 and 3, only the restoration of immunoregulatory subpopulations of Tμ-lymphocytes was detected. However, the immunoregulatory index did not change significantly.

A comprehensive assessment of treatment efficacy showed the advantages of complex therapy. Thus, at the end of the course of treatment, a significant improvement was noted as follows: 10% in group 1, 40% in group 2; Improvement in 1-36.7% of patients 43.3% - 2 and 37.3% - Group 3. 13.3% of patients were ineffective in the 1st, 0.67% - in the 2nd and 56.6% - in the 3rd groups.

Table 1. Dynamics of pelvic rheovasography (RVG) in patients with intestinal dysbiosis after a course of treatment

RVG indicators	1 Group (MT)	2 Group (Ganoderma Lucidum extracts))	3 Group (MT+ Ganoderma Lucidum extracts))
Ri (Ом)	0,039+0,0016 0,052+0,0013*	0,041±0,0017 0,069±0,01*	0,041±0,0022 0,047±0,0023
α(c)	0,24±0,04 0,20±0,07	0,25±0,08 0,19±0,07	0,26±0,08 0,22±0,07
β (c)	0,58±0,01 0,54±0,02	0,60±0,008 0,54±0,02*	0,61 ±0,011 0,57+0,24
T(c)	0,80±0,06 0,78±0,08	0,87±0,O07 0,80±0,03*	0,88±0,06 0,84±0,08
α/T(%)	30,0±0,26 25,6±1,24*	28,75±0,68 23,8±1,8*	31,6±0,41 28,8±2,30
Di (%)	73,9±4,50 53,2±2,7*	72,5±1,78 52,3±1,06*	60,7±0,89 57,3±2,7

Each cell of the table shows the indicators in the top row before treatment, and the indicators in the bottom row after treatment.

* - significant changes in the indicator during treatment.

The values of the Pearson criterion in the distribution of treatment outcomes in the two main groups relative to the comparison group were x2 = 10, 2, respectively; r = 0.038; x2 = 16.2; r = 0.014. The results of long-term treatment showed that positive results were maintained for an average of 40% in 1 month, and 66.7% in group 2 for 3 months. In 23.3% of 1st patients after 6 months; A positive effect was maintained in 46.7% of group 2. Recurrence of the disease after 6 months occurred in 27.6% of patients.

1st 0.33%; 2nd 57.1% 3rd groups. After 12 months, the positive effect was maintained in 13.3% of group 1 patients and 85% of group 2 patients. An increase in the inflammatory process after 12 months was observed in 46.7% of patients in group 1, 66.7% in group 2 and 20% in group 3. The high efficacy of long-term outcome-based treatment was confirmed by reliable values of the Pearson x2 criterion in two main groups compared to the control group; they were continuous during 12-month follow-ups (for groups 1 and 2, x2 = 23.8; r = 0.026; x2 = 28.5; r = 0.011).

Conclusions:

1.The results of the study allowed to identify several positive effects of magnetotherapy in combination with synbiotics on the impact on various links of the pathogenesis of the studied disease. The vasotropic effect plays an important role in realizing the therapeutic effect of magnetotherapy. The improvement in regional hemodynamics observed in most of the studies resulted in a reduction in pathogenic infection in the colon, which to some extent helped to improve the functional state of the intestine.

2. Complex treatment enhances and alters the analgesic and anti-inflammatory effect of magnetotherapy, has an immunocorrective effect, promotes the growth of saccharolytic microflora, restores the dynamic balance of intestinal microflora and improves the functional state of the intestine, has a positive effect on psycho-emotional state. One of the important components of the therapeutic efficacy of complex treatment is a decrease in the frequency of exacerbations of the disease and prolongation of the remission period, which is important as a method of secondary prevention of diseases of the reproductive system.

3. The results of the study suggest that therapeutic and restorative measures in the treatment of patients with intestinal dysbiosis at various stages of complex treatment consisting of MT and Ganoderma Lucidum extract expand the arsenal of non-drug agents are pathogenetically justified and effective.

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ЭФФЕКТИВНОСТЬ МАГНИТОТЕРАПИИ В КОМПЛЕКСЕ С ЭКСТРАТОМ ДРЕВЕСНОГО ГРИБА GANODERMA LUCIDUM В ЛЕЧЕНИИ БОЛЬНЫХ С ДИСБИОЗОМ КИШЕЧНИКА

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Резюме. *Обследованы 90 пациентов с дисбактериозом толстой кишки, 63 женщины и 27 мужчин в возрасте от 18 до 65 лет. В соответствии с задачами исследования все пациенты были разделены на группы, сопоставимые по основным клинико-физиологическим характеристикам. Пациентам первой группы (30 человек) проводилась магнитотерапия (МТ) на аппарате «Олимп-1». Воздействие осуществлялось 4 парами индукторов - соленоидов на область проекции органов толстой кишки; Параметры воздействия: интенсивность - 30% - 100%, частота 10 Гц, величина магнитной индукции - 5 мТл. Процедуры проводились ежедневно по 15-20 минут. Курс лечения - 10-12 процедур. Пациентам второй группы (30 человек) проводилось комплексное лечение: МТ по указанной выше методике, а также синбиотик в составе экстракта Ganoderma Lucidum - по 1 капсуле 2 раза в день во время еды в течение 21 дня. В третьей группе сравнения (30 пациентов) имитировали действие МТ от аппарата «Олимп-1» (плацебо). Курс лечения составлял 10-12 процедур. Экстракт Ganoderma Lucidum был включен в лечебный комплекс по указанной выше схеме. Результаты проведенных исследований дают основание рассматривать комплексное лечение МТ и синбиотиков в составе экстракта Ganoderma Lucidum как патогенетически обоснованное и эффективное в лечении больных ДК, что расширяет арсенал средств немедикаментозной терапии на различных этапах лечебно-восстановительных мероприятий в исследуемом контингенте пациентов.*

Ключевые слова: *Дисбиоз толстого кишечника, лечебные курсы, меры реабилитации, магнитотерапия, экстракт Ganoderma Lucidum.*