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THE EFFECT OF COMPLEX THERAPY INCLUDING VITAMIN D ON THE QUALITY OF LIFE OF PATIENTS WITH CHRONIC HEPATITIS C COMBINED WITH CHRONIC PANCREATITIS

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Chronic hepatitis C (CHC) and chronic pancreatitis (CP) are common, mutually aggravating diseases that are often accompanied by nutrient deficiencies, particularly vitamin D. However, currently existing data on the feasibility of inclusion of vitamin D in the complex therapy of patients with CHC and CP are contradictory and require further study. In order to evaluate the impact of complex therapy with the inclusion of vitamin D on the clinical course and quality of life of patients with CHC combined with CP, 52 patients with CHC+CP were divided into 2 groups depending on the prescription scheme of the polyenzyme drug and vitamin D. It was established that as a result of prescribing complex therapy with the addition of vitamin D, 100% of patients in group 1 and only 82.1% of patients in group 2 achieved sustained virological response (SVR). After the treatment, a decrease in the frequency of complaints of diarrhea, constipation, flatulence, abdominal pain, itching, heaviness in the right hypochondrium, hepatomegaly, arthralgia and myalgia was found in all patients, with a significant predominance in the group that additionally received vitamin D. After treatment, patients in group 1 were less likely to be bothered by anxiety, increased fatigue, emotional lability, and significantly higher quality of life indicators were found than in patients in group 2. Therefore, the inclusion of a polyenzyme drug with minimal lipase activity of 25,000 and vitamin D in a dose of 4,000 IU/day to the complex treatment of patients with CHC combined with CP increases the efficacy of antiviral therapy and leads to a marked regression of manifestations of hepatobiliary dysfunction, asthenovegetative and dyspeptic syndromes, thereby reducing the situational anxiety and improves the quality of life of these patients.

Key words: chronic hepatitis C, chronic pancreatitis, exocrine pancreatic insufficiency, vitamin D, virological response, direct antiviral drugs.

Connection of the publication with planned research works.

The scientific research was carried out within the departmental theme "Combined pathology and correction of homeostasis disorders of residents of the Carpathian region, taking into account adverse factors", state registration number 0121U110808 of the department of faculty therapy of the State Higher Educational Institution «Uzhhorod National University».

Introduction.

Chronic hepatitis C (CHC) is an extremely urgent medical problem today. According to the WHO report for 2021, about 1.5 million new cases of CHC are registered every year, and 58 million people are living with this diagnosis. Spontaneous elimination of HCV in chronically infected patients occurs only in ≈0.02% of patients per year, almost 70% of patients have one or more extrahepatic manifestations of CHC, and about 290,000 people die annually from the consequences of CHC [1, 2]. Often, the course of CHC is complicated by the presence of concomitant diseases, in particular,

of the gastrointestinal tract. One of these diseases is chronic pancreatitis (CP). Diseases of the liver and pancreatic gland have a mutually aggravating effect due to the anatomical proximity of these organs, the presence of a common blood supply and innervation [3]. The results of scientific research obtained by Blackard et al., Simons-Linares et al. indicate the possibility of HCV replication in β -cells of the pancreas and the possible development of acute pancreatitis in case of acute hepatitis B, C [4, 5].

CP is often manifested by a violation of the exocrine function of the pancreas, abdominal pain, defecation disorders, bloating and flatulence, which as a result leads to disturbances in the nutrition of patients and the appearance of a deficiency of microelements and vitamins, especially fat-soluble [6]. One of the most important and the one that affects the metabolism of phosphorus and calcium, mental health, protection against infections and autoimmune diseases, is vitamin D [7, 8]. However, according to various authors, the frequency of detection of reduced levels of vitamin D in the blood in the general population is 50-80% and is of a pandemic nature, the prevalence of vitamin D insufficiency among patients with CHC is from 39.2% to 71%, and among patients with CP – from 22% to 86.6% [9, 10].

A lack of vitamin D in the blood can cause a worse response to CHC antiviral therapy with direct antiviral drugs (DAD) and is associated with higher stages of liver fibrosis. Reduced levels of vitamin D are also associated with progression of CP due to increased intensity of fibrosis processes [9, 10].

Available scientific data on the effect of vitamin D on the clinical course of CHC are controversial. Thus, according to Bjelakovic et al. additional intake of vitamin D does not change the clinical course of CHC and the quality of life of patients, and Han et al. generally suggest that adding vitamin D to patients with CP, creates a risk of developing hypercalcemia, which may bring more harm than good [11, 12]. At the same time, Komolmit et al., Kondo et al., Cai et al. demonstrated that vitamin D can be beneficial in vitamin D-deficient CHC and CP patients, and Zhu et al. described the positive effects of vitamin D intake on mental health [9, 13-15]. That is, current data on the feasibility of including vitamin D in the complex therapy of patients with CHC and CP are contradictory and require further study. Therefore, the search for effective schemes for the treatment of CHC in comorbidity with CP, including the use of vitamin D, is an urgent task, the solution of which will contribute to the relief of symptoms and improvement of the quality of life of patients.

The aim of the study.

To evaluate the effect of complex therapy with the inclusion of vitamin D on the clinical course and quality of life of patients with CHC combined with chronic pancreatitis.

Object and research methods.

52 patients with CHC+CP with exocrine insufficiency of pancreatic gland who had an insufficient level of vitamin D were under observation (n=52, the proportion of men – 55.8% (29/52), women – 44.2% (23/52), average age – 52.4±7.56 years). All patients were on antiviral therapy and received sofosbuvir 400 mg + daclatasvir 60 mg once a day for 12 weeks. All patients also took the proton pump inhibitor (PPI) rabeprazole (Barol) 20 mg

once a day in the morning 30–40 minutes before meals for 1 month.

All participants were divided into 2 groups depending on the scheme of prescribing enzyme drugs and vitamin D.

Patients of group 1 (n=24) on the background of etiotropic therapy of CHC DAD+PPI daily – took the poly-enzyme drug Creon 25,000 according to the following scheme: 1 capsule 3 times a day during meals during the first month with subsequent transition to a maintenance dose of Creon 10000 1 capsule 3 times a day during the second month and 1 capsule at lunch during the main meal during the third month. One capsule of Creon 25,000 contains 300 mg of pancreatin in gastro-resistant granules (Creon minimicrospheres®), which have enzymatic activity: lipase 25,000 PhEur units, amylase 18,000 PhEur units, proteases 1000 PhEur units. Also, patients of group 1 took vitamin D (cholecalciferol) daily in a dose of 4000 IU in the form of tablets during 12 weeks of antiviral therapy and 12 weeks after the end of antiviral therapy.

Patients of the 2nd group (n=28) on the background of etiotropic therapy of CHC DAB + PPI daily took only Creon 10,000 1 capsule 3 times a day during meals with subsequent transition to taking Creon 10,000 1 capsule at lunch during the main intake food for another 2 months. Creon 10,000 contains 150 mg of pancreatin with enzymatic activity: lipase 10,000 PhEur units, amylase 8000 PhEur units, proteases 600 PhEur units.

All patients signed an informed consent to conduct research, the structure of which corresponded to the officially agreed, and the research itself – to the requirements of the Declaration of Helsinki (1975) as amended, the International Code of Medical Ethics (1983) and the relevant laws of Ukraine and WHO regulations. The study was approved by the local ethics commission of the State University “Uzhhorod National University” (protocol No. 6/2 dated September 7, 2021).

The diagnosis of CHC was established in accordance with the International Classification of Diseases of the 10th revision and verified by the detection of total antibodies of the IgG class to the structural and non-structural proteins of HCV (antiHCV IgG +) by the serological ELISA method, as well as by the indication of HCV RNA + in the blood of the studied patients by the PCR method with the determination of the viral loading and genotyping. All clinical, biochemical, serological, and molecular genetic studies were conducted in certified laboratories of the central city clinical hospital of Uzhhorod, communal non-commercial enterprise “Regional Clinical Infectious Disease Hospital” of the Transcarpathian Regional Council, and commercial laboratories (“Dila” and “Astra-Dia”). Indicators of biochemical blood analysis – total bilirubin and its fractions, total protein and fractions, activity of alanine aminotransferase (ALT) and aspartate aminotransferase (AST), alkaline phosphatase (ALP) and γ -glutamyl transpeptidase (GGT) were determined using an automatic biochemical analyzer and original Chem-Well reagents Awareness Technology INC (USA).

The degree of fibrosis and the activity of the necro-inflammatory process in the liver were determined using a non-invasive diagnostic method – FibroMax, which includes: FibroTest, ActiTest, SteatoTest, AshTest, NashTest and is carried out by the company BioPredictive (Paris, France).

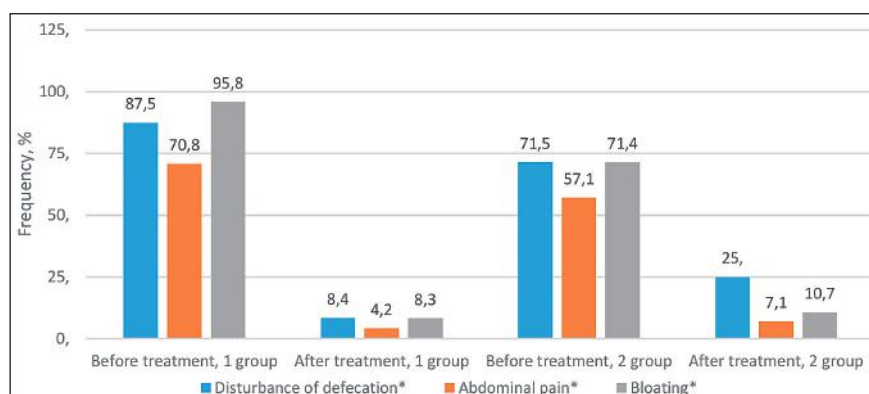


Figure 1 – Comparison of the frequency of symptoms from the pancreas in patients of groups 1 and 2 before and after treatment.

Note: * $p < 0,05$ comparing before and after treatment.

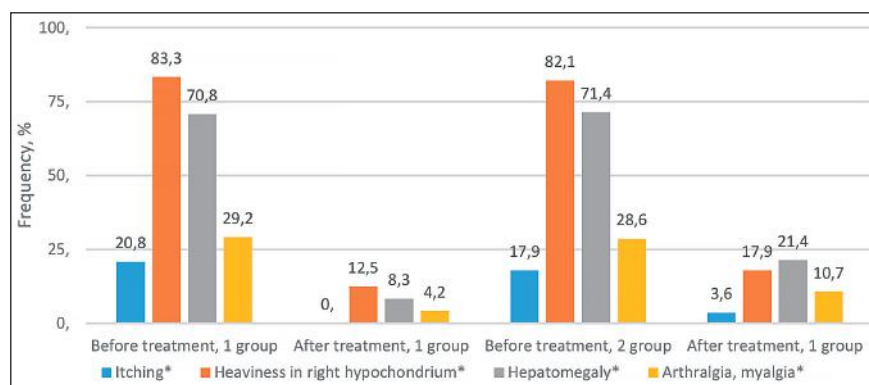


Figure 2 – Frequency of manifestations of hepatobiliary dysfunction in patients of groups 1 and 2 before treatment and after treatment.

Note: * $p < 0,05$ comparing the frequency of symptoms in patients of groups 1 and 2 before and after treatment.

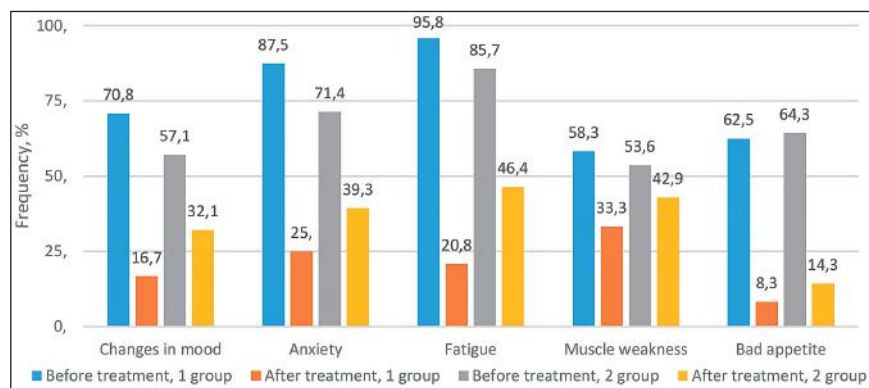


Figure 3 – Frequency of manifestations of asthenovegetative syndrome in patients of groups 1 and 2 before treatment and after treatment.

Note: * $p < 0,05$ comparing the frequency of symptoms in patients of groups 1 and 2 before and after treatment.

All patients underwent stool coproscopy, where the appearance of a small amount of neutral fat, altered muscle fibers and extracellular starch made it possible to suspect a violation of the exocrine function of the pancreas and the formation of chronic pancreatitis.

The diagnosis of CP was established in accordance with the Marseille-Rome criteria (1989) with additions and clarifications of the International Classification of Diseases of the 10th revision, as well as in accordance with the Order of the Ministry of Health of Ukraine dated September 10, 2014 No. 638 "On the approval and implementation of medical and technological documents on the standardization of medical of help in chronic

pancreatitis" [16]. The exocrine function of the pancreas was evaluated based on the results of fecal coproscopy and pancreatic fecal elastase-1 (FE-1). Determination of FE-1 in feces and concentration of 25-OH total vitamin D in serum was performed using ELISA.

To assess the quality of life, we used the SF-12 quality of life questionnaire – a shortened and much simpler for respondents version of the SF-36 questionnaire. This questionnaire is able to provide information about the state of physical and mental health. Indicators of each scale are measured in points (from 0 to 100), with a higher score indicating a higher level of quality of life. Values of indicators of physical and mental components of health from 0 to 20 points correspond to a poor quality of life; 21-40 – average; 41-60 – good; 61-80 – very good; 81-100 – excellent. The value of the integrated quality of life indicator is determined by calculating the arithmetic mean of the sum of the indicators. The scales of the test make it possible to evaluate two integral indicators characterizing the quality of life: "physical component of health" (PCS) and "mental component of health" (MCS).

Situational anxiety was determined using the Spielberger-Hanin method. When analyzing the results, the following anxiety scores were used: less than 30 points – low, 31-44 points – average, more than 45 points – high.

The analysis and processing of the results of the examination of patients was carried out using the computer program Jamovi 2.3.21, Microsoft Office Excel for Windows 2016. The normality of the distribution of interval variables was assessed

by the Shapiro-Wilk criterion. Mean values are shown as $M \pm SD$. Comparison of mean values was performed using the Mann-Whitney, Wilcoxon U-test. McNemar's test was used to compare nominal characteristics in paired samples. The difference was considered statistically significant at $p < 0,05$

Research results and their discussion.

The data we obtained showed that as a result of complex therapy with the additional usage of vitamin D, sustained virological response (SVR) was achieved in 100% (24/24) of patients in group 1 and only 82.1% (23/28) in patients in group 2 ($p = 0,029$), which comple-

ments the data of Moroz et al. (2016), Udomsinprasert et al. (2020), who described the positive effect of vitamin D on achieving SVR in patients with CHC [17, 18].

When analyzing the clinical manifestations after the treatment, a positive trend was established in all patients, with a significant predominance in the group that additionally received vitamin D. In particular, complaints of diarrhea disappeared in 92.3% (12/13) of patients of group 1 ($p < 0.001$) and in 58.3% (7/12) of patients of group 2 ($p = 0.008$), constipation – in 87, 5% (7/8) of patients of group 1 ($p = 0.008$) and in 75% (6/8) of patients of group 2 ($p = 0.014$), abdominal pain – in 94.1% (16/17) of patients of group 1 ($p < 0.001$) compared to 87.5% (14/16) of patients in group 2 ($p < 0.001$), and bloating – in 91.3% (21/23) of patients in group 1 ($p < 0.001$) and in 85% (17/20) patients of group 2 ($p < 0.001$) (fig. 1).

Periodic itching disappeared in 100% (5/5) of patients of group 1 ($p < 0.05$) and 80% (4/5) of patients of group 2 ($p = 0.046$); heaviness in the right hypochondrium – in 85% (17/20) of patients of group 1 ($p < 0.001$) and in 78.2% (18/23) of patients of group 2 ($p < 0.001$), the size of the liver was normalized in 88.2% (15/17) of patients of group 1 ($p < 0.001$) and in 70% (14/20) of patients of group 2 ($p < 0.001$), 85.7% (6/7) of patients stopped complaining of arthralgia and myalgia in group 1 ($p = 0.014$) and 62.5% (5/8) of patients in group 2 ($p = 0.025$). That is, positive dynamics of symptoms of hepatobiliary dysfunction were noted in both groups, but more pronounced changes were observed in patients of group 1 (fig. 2).

When comparing the frequency of symptoms of asthenovegetative syndrome, it was found that the patients of group 1 had a more pronounced positive dynamics than the patients of group 2. In particular, appetite improved in 86.7% (13/15) of patients in group 1 ($p < 0.001$) and in 77.8% (14/18) of patients in group 2 ($p < 0.001$), mood swings stopped bothering 76.5% (13/17) patients of group 1 ($p < 0.001$) compared to 43.8% (7/16)

Table – Indicators of quality of life and situational anxiety of patients before and after treatment

Index, points	Groups of patients			
	1 (n=24)		2 (n=28)	
	Before treatment, M $\pm$ m	After treatment, M $\pm$ m	Before treatment, M $\pm$ m	After treatment, M $\pm$ m
Integral	30,9 $\pm$ 6,2	42,2 $\pm$ 2,65* [^]	29,8 $\pm$ 5,7	36,8 $\pm$ 3,43* [^]
Physical health	30,2 $\pm$ 6,75	41,3 $\pm$ 2,83* [^]	29,1 $\pm$ 6,31	35,8 $\pm$ 4,03* [^]
Mental health	30,7 $\pm$ 7,06	43,1 $\pm$ 3,77* [^]	29,8 $\pm$ 6,29	37,8 $\pm$ 4,55* [^]
Situational anxiety	47,8 $\pm$ 2,67	36,5 $\pm$ 4,87* [^]	47,2 $\pm$ 2,06	40,0 $\pm$ 3,47* [^]

Notes: * $p < 0.001$ comparing before and after treatment within the same group; [^] $p < 0.001$ comparing groups 1 and 2 after treatment.

of patients of group 2 ($p = 0.008$), anxiety decreased in 62.5% (15/21) of patients of group 1 ($p < 0.001$) and in 45% (9/20) of patients of group 2 ($p = 0.003$), increased fatigue ceased to be noted by 78.3% (18/23) of patients of group 1 ($p < 0.001$) in comparison with 45.8% (11/24) of patients in group 2 ($p < 0.001$), and muscle weakness disappeared in 42.9% (6/14) in group 1 ($p = 0.014$) as opposed to 20% (3/15) in group 2 ($p > 0.05$) (fig. 3).

As a result of the treatment, quality of life indicators improved and situational anxiety decreased in patients of both groups 1 and 2. However, in patients of group 1, the indicators were significantly better than in patients of group 2 ($p < 0.001$) (table).

Conclusions.

The inclusion of a polyezyme drug with minimal lipase activity of 25,000 and vitamin D in a dose of 4,000 IU/day to the complex treatment of patients with CHC combined with CP increases the efficacy of antiviral therapy and leads to a marked regression of manifestations of hepatobiliary dysfunction, asthenovegetative and dyspeptic syndromes, thereby reducing situational anxiety and improves the quality of life of these patients.

Prospects for further studies.

Study of the effect of vitamin D on the quality of life of patients with CHC+CP with pancreatic exocrine insufficiency in larger samples and longer intake.

References

- World Health Organization. Hepatitis C. WHO; 2021 [viewed 2021 Feb 5]. Available from: <https://www.who.int/news-room/fact-sheets/detail/hepatitis-c>.
- Brunner N, Bruggmann P. Trends of the Global Hepatitis C Disease Burden: Strategies to Achieve Elimination. J Prev Med Public Health. 2021 Jul 31;54(4):251–8. DOI: [10.3961/jpmph.21.151](https://doi.org/10.3961/jpmph.21.151).
- Khomyn HO, Babinets LS, Halabitska IM. Otsinka morfolohichnykh zminhastrroduodenal'noyi zony patsiyentiviz khronichnym pankreatytom u komorbidnosti iz khronichnym virusnym hepatytom C. Gastroenterologiya. 2023 Jun 22;57(2):70–7. DOI: [10.22141/2308-2097.57.2.2023.534](https://doi.org/10.22141/2308-2097.57.2.2023.534). [in Ukrainian].
- Blackard JT, Kong L, Lombardi A, Homann D, Hammerstad SS, Tomer Y. A preliminary analysis of hepatitis C virus in pancreatic islet cells. Virol J. 2017 Dec;14(1):237. DOI: [10.1186/s12985-017-0905-3](https://doi.org/10.1186/s12985-017-0905-3).
- Simons-Linares CR, Imam Z, Chahal P. Viral-Attributed Acute Pancreatitis: A Systematic Review. Dig Dis Sci. 2021 Jul;66(7):2162–72. DOI: [10.1007/s10620-020-06531-9](https://doi.org/10.1007/s10620-020-06531-9).
- Beyer G, Habtezion A, Werner J, Lerch MM, Mayerle J. Chronic pancreatitis. The Lancet. 2020 Aug;396(10249):499–512. DOI: [10.1016/S0140-6736\(20\)31318-0](https://doi.org/10.1016/S0140-6736(20)31318-0).
- Chen CH, Liu LK, Chen MJ, Lee WJ, Lin MH, Peng LN, et al. Associations between vitamin D deficiency, musculoskeletal health, and cardiometabolic risk among community-living people in Taiwan. Medicine (Baltimore). 2018 Dec 28;97(52):e13886. DOI: [10.1016/S0140-6736\(20\)31318-0](https://doi.org/10.1016/S0140-6736(20)31318-0).
- Liu D, Meng X, Tian Q, Cao W, Fan X, Wu L, et al. Vitamin D and Multiple Health Outcomes: An Umbrella Review of Observational Studies, Randomized Controlled Trials, and Mendelian Randomization Studies. Adv Nutr. 2021 Nov 23;13(4):1044–62. DOI: [10.1093/advances/nmab142](https://doi.org/10.1093/advances/nmab142).
- Cai F, Hu C, Chen CJ, Han YP, Lin ZQ, Deng LH, et al. Vitamin D and Pancreatitis: A Narrative Review of Current Evidence. Nutrients. 2022 May 18;14(10):2113. DOI: [10.3390/nu14102113](https://doi.org/10.3390/nu14102113).
- Shostakovych-Koretska LL, Nikolaychuk MA, Budayeva IV, Shevchenko-Makarenko OP, Lytyviy KY, Biletska SV. Comparative analysis of vitamin D contents in patients with chronic viral hepatitis C and healthy. Medicni perspektivi. 2019;24(4):94–101. DOI: [10.26641/2307-0404.2019.4.189360](https://doi.org/10.26641/2307-0404.2019.4.189360).
- Bjelakovic G, Nikolova D, Bjelakovic M, Gluud C. Vitamin D supplementation for chronic liver diseases in adults. Cochrane Database Syst Rev. 2017 Nov 3;2017(11):CD011564. DOI: [10.1002/14651858.CD011564.pub2](https://doi.org/10.1002/14651858.CD011564.pub2).
- Han Z, Margulies SL. Vitamin D Deficiency in Patients with Pancreatitis: Is Vitamin D Replacement Required? Pancreat Disord Ther [Internet]. 2016 [cited 2023 Oct 4];6(3). Available from: <https://www.omicsgroup.org/journals/vitamin-d-deficiency-in-patients-with-pancreatitis-is-vitamin-d-replacement-required-2165-7092-1000172.php?aid=71670>. DOI: [10.4172/2165-7092.1000172](https://doi.org/10.4172/2165-7092.1000172).

13. Komolmit P, Kimtrakool S, Suksawatamnuay S, Thanapirom K, Chattrasophon K, Thaimai P, et al. Vitamin D supplementation improves serum markers associated with hepatic fibrogenesis in chronic hepatitis C patients: A randomized, double-blind, placebo-controlled study. *Sci Rep*. 2017 Aug 21;7:8905. DOI: [10.1038/s41598-017-09512-7](https://doi.org/10.1038/s41598-017-09512-7).
14. Kondo Y. Hepatitis C infected patients need vitamin D3 supplementation in the era of direct acting antivirals treatment. *World J Gastroenterol*. 2017 Feb 28;23(8):1325–7. DOI: [10.3748/wjg.v23.i8.1325](https://doi.org/10.3748/wjg.v23.i8.1325).
15. Zhu C, Zhang Y, Wang T, Lin Y, Yu J, Xia Q, et al. Vitamin D supplementation improves anxiety but not depression symptoms in patients with vitamin D deficiency. *Brain Behav*. 2020 Sep 18;10(11):e01760. DOI: [10.1002/brb3.1760](https://doi.org/10.1002/brb3.1760).
16. MOZ Ukrainy. Nakaz MOZ Ukrainy №638 vid 10.09.2014 r. «Pro zatverdzhennia ta vprovadzhennia medyko-tekhnologichnykh dokumentiv zi standartyzatsii medychnoi dopomohy pry khronichnomu pankreatyti». MOZ Ukrainy; 2014. [in Ukrainian]
17. Moroz LV, Alkhazov Yu, Abdullaieva N, Androsova OS, Haiduk OA. Comparative characteristics of the effectiveness of various hepatitis C treatment regimens (Own experience). *Hepatology*. 2017;(3):6–11. [in Ukrainian].
18. Udomsinprasert W, Jittikoon J, Sukkho S, Pojarassangkul N, Sangroongruangsri S, Chaikledkaew U. Decreased circulating vitamin D reflects adverse outcomes of hepatitis C virus infection: A systematic review and meta-analysis. *J Infect*. 2020 Oct;81(4):585–99. DOI: [10.1016/j.jinf.2020.06.025](https://doi.org/10.1016/j.jinf.2020.06.025).

ВПЛИВ КОМПЛЕКСНОЇ ТЕРАПІЇ ІЗ ВКЛЮЧЕННЯМ ВІТАМІНУ D НА ЯКІСТЬ ЖИТТЯ ХВОРИХ НА ХРОНІЧНИЙ ГЕПАТИТ С ПОЄДНАНИЙ ІЗ ХРОНІЧНИМ ПАНКРЕАТИТОМ

Дербак М. А., Бучок О. В., Болдіжар О. О., Блецкан М. М., Свистак В. В.

Резюме. *Вступ.* Хронічний гепатит С (ХГС) часто ускладнюється наявністю супутніх захворювань органів шлунково-кишкового тракту, одним з яких є хронічний панкреатит (ХП). Це негативно впливає на клінічний перебіг обох захворювань, сприяє виникненню дефіциту поживних речовин, зокрема вітаміну D та погіршує якість життя (ЯЖ) пацієнтів. Наявні наукові дані щодо впливу вітаміну D на клінічний перебіг ХГС є дискусійними. Наразі, в дослідженнях встановлено як відсутність впливу вітаміну D на перебіг ХГС та ХП, так і позитивний його вплив на стан печінки та підшлункової залози (ПЗ) при ХГС та ХП. Тобто, сучасні дані щодо доцільності включення до комплексної терапії хворих на ХГС та ХП вітаміну D є суперечливими і потребують подальшого вивчення. Тому, пошук ефективних схем лікування ХГС коморбідного з ХП, в тому числі із застосуванням вітаміну D, є актуальним завданням, вирішення якого сприятиме полегшенню симптомів та покращенню якості життя хворих.

Об'єкт і методи дослідження. Під спостереженням знаходились 52 хворих на ХГС+ХП із зовнішньосекреторною недостатністю ПЗ (ЗСНПЗ), які мали недостатній рівень вітаміну D та були розділені на 2 групи, залежно від призначеного лікування. Всі хворі знаходились на противірусній терапії та отримували софосбувір 400 мг + даклатасвір 60 мг х 1 раз на добу протягом 12 тижнів і рабепразол по 20 мг 1 раз на добу протягом місяця. Залежно від схеми прийому ферментних препаратів та вітаміну D всі хворі були розділені на 2 групи. Хворі 1 групи (n=24) приймали Креон 25 тис. по схемі і вітамін D 4000 МО/добу протягом 12 тижнів ПВТ та 12 тижнів після завершення ПВТ. Хворі 2 (n=28) групи приймали лише Креон 10 тис. по схемі. Оцінка ЯЖ проводилась за допомогою опитувальника SF-12, а ситуативної тривожності – за методикою Спілбергера-Ханіна. Аналіз та обробка даних проводились в програмах Jamovi 2.3.2.1, Microsoft Office Excel for Windows 2016 з використанням U-критерію Манна-Уїтні, Вілкоксона, тесту Макнемара. Різницю вважали статистично значущою при p<0,05.

Результати. В результаті комплексної терапії з додаванням вітаміну D стійкої вірусологічної відповіді (СВВ) досягли 100% хворих 1 групи і лише 82,1% хворих 2 групи. Після проведеного лікування встановлено зменшення частоти скарг на діарею, закреп, здуття живота, абдомінальний біль, свербіж, важкість у правому підребер'ї, гепатомегалію, артралгії та міалгії в усіх хворих, з достовірним переважанням у групі, що додатково отримували вітамін D. Після лікування хворих 1 групи рідше турбувала тривожність, підвищена втомлюваність, емоційна лабільність та було виявлено достовірно вищі показники якості життя, ніж у хворих 2 групи.

Висновки. Включення поліферментного препарату з мінімальною активністю ліпази 25000 та вітаміну D в дозі 4000 МО/добу до комплексного лікування хворих на ХГС поєднаний з ХП, підвищує ефективність противірусної терапії та веде до виразного регресу проявів гепатобіліарної дисфункції, астеновегетативного і диспептичного синдромів, чим знижує ситуативну тривожність та підвищує якість життя цих пацієнтів.

Ключові слова: хронічний гепатит С, хронічний панкреатит, зовнішньосекреторна недостатність підшлункової залози, вітамін D, вірусологічна відповідь, препарати прямої противірусної дії.

THE EFFECT OF COMPLEX THERAPY INCLUDING VITAMIN D ON THE QUALITY OF LIFE OF PATIENTS WITH CHRONIC HEPATITIS C COMBINED WITH CHRONIC PANCREATITIS

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Abstract. *Introduction.* Chronic hepatitis C (CHC) is often complicated by the presence of concomitant diseases of the gastrointestinal tract, one of which is chronic pancreatitis (CP). This negatively affects the clinical course of both diseases, contributes to the occurrence of nutrient deficiencies, in particular vitamin D, and worsens the quality of life (QoL) of patients. Available scientific data on the effect of vitamin D on the clinical course of CHC are controversial. Currently, studies have established both the absence of an effect of vitamin D on the course of CHC and CP, as well as its positive effect on the state of the liver and pancreas (PC) in CHC and CP. That is, the current data on the feasibility of including vitamin D in the complex therapy of patients with CHC and CP are contradictory and require further study. Therefore, the search for effective treatment regimens for CHC comorbid with CP, including the use of vitamin D, is an urgent task, the solution of which will contribute to the relief of symptoms and improvement of the quality of life of patients.

Object and research methods. 52 patients with CHC+CP with pancreatic exocrine insufficiency who had an insufficient level of vitamin D were under observation and were divided into 2 groups, depending on the prescribed treatment. All patients were on antiviral therapy and received sofosbuvir 400 mg + daclatasvir 60 mg once a day for 12 weeks and rabeprazole 20 mg once a day for a month. Depending on the scheme of taking enzyme preparations

and vitamin D, all patients were divided into 2 groups. Group 1 patients (n=24) received Creon 25,000 according to the scheme and vitamin D 4,000 IU/day during 12 weeks of antiviral therapy and 12 weeks after the end of antiviral therapy. Patients of group 2 (n=28) took only Creon 10000 according to the scheme. Quality of life was assessed using the SF-12 questionnaire, and situational anxiety was assessed using the Spielberger-Hanin method. Data analysis and processing were carried out in Jamovi 2.3.2.1, Microsoft Office Excel for Windows 2016 programs using the Mann-Whitney U-test, Wilcoxon, McNemar test. The difference was considered statistically significant at $p < 0.05$.

Results. As a result of complex therapy with the additional usage of vitamin D, sustained virological response (SVR) was achieved in 100% of patients in group 1 and only 82.1% of patients in group 2. After the treatment, a decrease in the frequency of complaints of diarrhea, constipation, flatulence, abdominal pain, itching, heaviness in the right hypochondrium, hepatomegaly, arthralgia, and myalgia was observed in all patients, with a significant preponderance in the group that additionally received vitamin D. After treatment patients of group 1 were less bothered by anxiety, increased fatigue, emotional lability, and significantly higher indicators of quality of life were found than patients of group 2.

Conclusions. The inclusion of a polyenzyme drug with minimal lipase activity of 25,000 and vitamin D in a dose of 4,000 IU/day to the complex treatment of patients with CHC combined with CP increases the efficacy of antiviral therapy and leads to a marked regression of manifestations of hepatobiliary dysfunction, asthenovegetative and dyspeptic syndromes, thereby reducing situational anxiety and improves the quality of life of these patients.

Key words: chronic hepatitis C, chronic pancreatitis, exocrine insufficiency of the pancreas, vitamin D, virological response, direct antiviral drugs

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The Authors declare no conflict of interest.

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SOCIO-DEMOGRAPHIC CHARACTERISTICS OF PATIENTS WITH DIFFERENT TYPES OF ENCEPHALOPATHIES

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Scientific data indicate an association of clinical manifestations of various types of encephalopathy with several modifiable and non-modifiable factors, such as depression, level of education, socioeconomic status, physical activity, overweight, and others, but scientists continue to search for associative links.

The study aims to analyse the main risk factors for chronic post-traumatic encephalopathy (CTE), chronic vascular encephalopathy (CVE), chronic alcohol encephalopathy (CAE) and post-infectious encephalopathy (PIE).

In order to identify the main risk factors, 520 medical records of patients with different types of encephalopathy were analysed and divided into four groups: 1 – patients with CTE (n=145), 2 – patients with CVE (n=145), 3 – patients with CAE (n=102) and 4 – patients with PIE (n=128). Statistical analysis of the data was performed using Microsoft Excel and STATISTICA 13.0.

Characteristic differences in the gender aspect were revealed, in particular, a significantly higher number of male patients with CTE compared to patients with CVA and PIE, as well as female patients with CVE compared to patients