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PATIENT'S VIEW ON THE TREATMENT OF DIFFUSE FORM ALOPECIA ASSOCIATED WITH COVID-19

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ABSTRACT

The purpose of the study to analyze the subjective assessment of the effectiveness of treatment of patients with diffuse form of alopecia associated with COVID-19 based on a medical and sociological survey. **Materials and Methods.** The study included a survey of 129 patients who received therapy for diffuse alopecia associated with COVID-19. As a comparison, an analysis was made between 82 (n1=100%) patients undergoing complex therapy using the dietary supplement "Vitaminералle" in combination with a physiotherapy technique using the Sincery laser device model BS-LL7H (Republic of Korea) and 42 (n2=100%) patients who received standard therapy in accordance with the recommendations for the treatment of patients with alopecia in the Republic of Uzbekistan. Directly, the subjective assessment questionnaire included five questions on the dynamics of growth and general appearance of hair, the degree of satisfaction with the treatment, the size of the area of baldness and visual satisfaction. **Results.** Taking into account the data obtained, it was noted that the majority, 70 (85.4%) patients receiving combination therapy express a positive assessment in connection with satisfaction with the treatment of DA associated with COVID-19. Compared with 23 (48.9%) patients who received standard therapy who are not satisfied with the result of the treatment. When evaluating the answers to questions: No. 1 (changes in the area of baldness after a course of treatment), No. 2 (changes in the appearance of hair after a course of treatment), No. 3 (changes in hair growth after a course of treatment), No. 4 (evaluation of the effectiveness of a course of treatment), No. 5 (degree of satisfaction with hair growth depending on the area of the scalp), statistically significant differences were found ($p<0.001$, $p=0.002$, $p<0.001$, $p<0.001$, $p=0.010$, $p<0.001$, respectively) between respondents I and Group II, (methods of statistical analysis used: Pearson's Chi-square). When comparing the degree of satisfaction with hair growth in the parietal region of the scalp, the degree of satisfaction with hair growth in the temporal region of the scalp, depending on the group of patients, it was not possible to identify statistically significant differences ($p=0.605$, $p=0.503$, respectively). **Conclusions.** When summing up the results of the medical and sociological survey, a significant advantage of combination therapy with the use of dietary supplements "Vitaminералle", correction of nutritional status in combination with hardware physiotherapy methods was revealed compared to the standard protocol for the treatment of DA associated with COVID-19. This conclusion is confirmed by the results of the analysis of the subjective assessment of the treatment performed between patients in the study.

KEYWORDS: Questionnaire, diffuse alopecia, subjective assessment, COVID-19.

INTRODUCTION

Diffuse alopecia (DA) is a common complaint and a serious problem in dermatological practice worldwide.[5] The problem of DA has become especially acute during the pandemic of a new coronavirus infection COVID-19.[3] It is noteworthy that cases of DA associated with COVID-19 have recently become more frequent.[6] Research over the past 2 years has identified a relationship between COVID-19 and various dermatological conditions such as DA.[1,2] Despite the fact that the pathogenetic mechanism of the occurrence of DA is unknown, modern studies increasingly demonstrate the relationship of alopecia with the microelement status (MS) of the patient's body. More than 30 years ago, A.P.Avtsyn et al. (1991) for the first time revealed the issue of deficiency or excess of elements in the human body, which leads to various undesirable events. The authors defined this condition as "microelementosis".[Error! Reference source not found.] At the moment, there are studies demonstrating the relationship between the levels of macro- and microelements in the blood serum and hair of patients suffering from DA, and the direct effect of MS on the course of alopecia.[8] The exact mechanisms by which the SARS-COV-2 coronavirus affects the onset of DA are not well known, but the most likely plausible is the release of large

amounts of cytokines during the incubation period of the viral disease, which initiates the development of DA by damaging hair matrix cells.[11]

The increase in patients with this problem, unfortunately, did not solve a number of global problems for the treatment and diagnosis of DA associated with COVID-19.[7] One of the most effective methods for diagnosing DA and correcting conservative therapy today is spectrometric analysis of MS.[10] However, the modernization and improvement of the quality of treatment of patients with DA associated with COVID-19 often involves the dynamic control of MS. But this is not always affordable in terms of financial costs and patient capabilities. It is important to improve diagnostic measures in patients with DA due to the increase in the number of cases of postcovid alopecia and the insufficient level of therapeutic and preventive measures.

The purpose of the study – based on a medical and sociological survey, to analyze a subjective assessment of the effectiveness of treatment of patients with diffuse form of alopecia associated with COVID-19.

MATERIALS AND METHODS

Based on clinical department of dermatovenereology of the Tashkent Medical Academy (TMA), from November 2020 to October 2022, a medical and sociological study was conducted among 129 patients suffering from DA associated with COVID-19. The study included patients with an average age of 30±3.8 years, among the survey participants were 60 (46.5%) men and 69 (53.5%) women. Patients were divided into two groups depending on the type of DA therapy. Group I - included 82 (63.6%) who underwent complex therapy using the correction of the microelement status, the dietary biological active additive BAA "Vitamineralle" in combination with the physiotherapy technique using the Sincery laser device model BS-LL7H (Republic of Korea). In group II – there were 47 (36.4%) patients who received standard therapy using supplements containing copper 3.0 mg, zinc 50.0 mg, piracina injections (consisting of zinc with pyridoxine), biotin preparation 10,000 mg. The survey was carried out 12 weeks after the start of treatment, using a specific questionnaire formulated and developed of TMA. The questionnaire consisted of five questions:

Question No. 1 - changes in the area of baldness areas after the course of treatment;

Question No. 2 - changes in the appearance of hair after a course of treatment;

Question No. 3 - changes in hair growth after the course of treatment;

Question No. 4 - evaluation of the effectiveness of the course of treatment;

Question No. 5 - the degree of satisfaction with hair growth, depending on the area of the scalp;

RESULTS

When evaluating the answers to questions: No. 1, No. 2, No. 3, No. 4 and No. 5, statistically significant differences were revealed ($p<0.001$, $p=0.002$, $p<0.001$, $p<0.001$, $p=0.010$ and $p<0.001$, respectively) between respondents of groups I and II, (methods used: Pearson's χ^2). When comparing the degree of satisfaction with hair growth in the parietal region of the scalp, the degree of satisfaction with hair growth in the temporal region of the scalp, depending on the group of patients, it was not possible to identify statistically significant differences ($p=0.605$, $p=0.503$, respectively) (methods used: Pearson's χ^2), (see Table).

Table Analysis data obtained in framework the survey subjective evaluation of the treatment of DA.

Indicators	Categories	Groups		p
		Group I (%)	Group II (%)	
Question No. 1	Significant improvement	5 (6,1)	7 (14,9)	< 0,001*
	Slight improvement	66 (80,5)	16 (34,0)	
	Refrained from answering	11 (13,4)	8 (17,0)	
	Slight deterioration	-	12 (25,5)	
	Significant deterioration	-	4 (8,5)	
Question No. 2	Significant improvement	7 (8,5)	-	0,002*
	Slight improvement	36 (43,9)	9 (19,1)	
	Refrained from answering	-	-	
	Slight improvement	35 (42,7)	33 (70,2)	
	Significant deterioration	4 (4,9)	5 (10,6)	
Question No. 3	Significant improvement	46 (56,1)	1 (2,1)	< 0,001*
	Slight improvement	21 (25,6)	2 (4,3)	
	Refrained from answering	-	-	
	Slight deterioration	15 (18,3)	39 (83,0)	
	Significant deterioration	-	5 (10,6)	
Question No. 4	Effective	33 (40,3)	3 (6,4)	< 0,001*
	Negligible effect	30 (36,5)	20 (42,6)	
	No effect	18 (21,9)	3 (6,4)	

	Not effective	1 (1,3)	21 (44,7)	
Question No. 5.1	Satisfactory	42 (51,2)	12 (25,5)	0,010*
	Unsatisfactory	40 (48,8)	35 (74,5)	
Question No. 5.2	Satisfactory	45 (54,9)	19 (40,4)	0,605
	Unsatisfactory	37 (45,1)	28 (59,6)	
Question No. 5.3	Satisfactory	52 (63,4)	20 (42,6)	0,503
	Unsatisfactory	30 (36,6)	27 (57,4)	
Question No. 5.4	Satisfactory	58 (70,7)	-	< 0,001*
	Unsatisfactory	24 (29,3)	47 (100,0)	

Question No. 1 – change (decrease/increase) in the area of baldness areas after the course of treatment: most of the respondents from group I - 66 (80.5%) noted a slight decrease in the area of alopecia after course of treatment, 11 (13.4%) patients abstained from answering this question, 5 (6.1%) patients noted a significant reduction in the area of alopecia after a course of treatment. Respondents of group II in the majority of 12 (34.0%) cases noted a slight decrease in alopecia zones after the course of treatment, 8 (17.0%) respondents refrained from answering, 7 (14.9%) patients noted a significant decrease in alopecia zones after therapy, however, 4 (8.5%) patients responded in favor of a significant increase in the area of alopecia after they completed the course of treatment. *Question No. 2* – change in the (visual) appearance of the hair after the course of treatment: the majority of 36 (43.9%) respondents from group I noted a slight improvement in the appearance of the hair after the course of treatment, 35 (42.7%) noted a slight deterioration in the appearance of the hair, 7 (8.5%) respondents were of the opinion that there was a significant improvement in the appearance of their hair, and 4 (4.9%) patients noted a significant deterioration in the appearance of their hair after a course of treatment. In-group II, 33 (70.2%) patients noted a slight deterioration in the appearance of the hair after the course of treatment, 9 (19.1%) respondents noted a slight improvement in the appearance of the hair, and 5 (10.6%) patients noted a significant deterioration in the appearance hair after treatment. *Question No. 3* – subjective assessment of hair growth after the course of treatment: 46 (56.1%) respondents from group I noted a significant improvement in hair growth after the course of treatment, 21 (25.6%) patients expressed an opinion about a slight improvement in hair growth after treatment, and 15 (18.3%) noted a slight deterioration in hair growth. In the II group of patients, 39 (83.0%) respondents noted a slight deterioration in hair growth after completion of the course of therapy, 5 (10.6%) noted a significant deterioration in hair growth after therapy, and only 2 (4.3%) and 1 (2 .1%) noted a slight and a significant improvement in hair growth after a course of treatment, respectively. *Question No. 4* – subjective assessment of the effectiveness of treatment, depending on the criterion for hair reduction. In-group I, 33 (40.2%) patients noted a slight effect of DA treatment, 25 (30.5%) patients noted a significant effect of DA treatment, 23 (28.0%) and 1 (1.2%) did not note the effect and noted the ineffectiveness of the therapy for DA. In-group II, 21 (44.7%) patients noted the ineffectiveness of therapy, 20 (42.6%) patients noted a slight effect, 3 (6.4%) patients noted a significant effect of therapy, and 3 (6.4%) patients noted no effect. When analyzing the answers to *question No. 5.1-5.4* – 52 (63.4%) patients expressed their overall satisfaction with the therapy received, and 30 (36.5%) patients expressed their overall dissatisfaction with the DA combination therapy. In-group II, 20 (42.5%) expressed overall satisfaction with the therapy and 27 (57.4%) responded in favor of overall dissatisfaction with standard DA therapy.

DISCUSSION OF THE OBTAINED RESULTS

Based on the results of a survey of patients using a specific questionnaire for the subjective assessment of satisfaction with DA treatment, we obtained the following data: most of the respondents from group I - 71 (86.6%) noted a satisfactory change (decrease/increase) in the area of baldness areas after the course of treatment, 11 (13.4%) patients refrained from answering this question. Respondents of group II in the majority of 43 (91.5%) cases noted a slight decrease in alopecia zones after the course of treatment, or refrained from answering. However, 4 (8.5%) patients responded in favor of increasing the area of alopecia after they completed the course of treatment. When asked about the change in the (visual) appearance of the hair after the course of treatment, the majority of 42 (52.2%) respondents from group I noted an improvement in the appearance of the hair after the course of treatment, 35 (42.7%) noted a slight deterioration in the appearance of the hair, 7 (8.5%) of respondents are of the opinion that there is a significant improvement in the appearance of hair after combined treatment. In-group II, 38 (80.8%) patients noted a deterioration in the appearance of the hair after the course of treatment, only 9 (19.1%) respondents noted an improvement in the appearance of the hair after the treatment according to the standard protocol for the treatment of DA. When answering the question about the subjective assessment of hair growth after a course of treatment, 67 (81.7%) respondents from group I noted an improvement in hair growth after a course of combined treatment, 15 (25.6%) patients expressed their opinion in favor of worsening hair growth after therapy. In-group II patients, 44 (93.6%) respondents noted a deterioration in hair growth after completion of treatment, and only 3 (4.3%) patients noted an improvement in hair growth after a course of standard DA therapy. When asking the participants of the

study about the subjective assessment of the effectiveness of treatment, 58 (70.7%) respondents from group I spoke in favor of the effectiveness of combination therapy, however, 24 (28.0%) patients were not satisfied with the therapeutic effect of the received therapy for DA. In-group II, 27 (57.4%) patients did not note the effectiveness of the therapy, and 20 (42.6%) respondents noted the effect of the standard type of DA treatment. When respondents answered the question of overall satisfaction with the treatment of DA associated with COVID-19, 52 (63.4%) patients expressed their opinion of overall satisfaction with the therapy received, and 30 (36.5%) patients expressed general dissatisfaction with the combined therapy of DA. In-group II, 20 (42.5%) expressed overall satisfaction with the therapy and 27 (57.4%) responded in favor of overall dissatisfaction with standard DA therapy.

When summing up the results of the medical and sociological survey, a significant advantage of combination therapy with the use of dietary supplements "Vitamineralle", correction of nutritional status in combination with hardware physiotherapy methods was revealed compared to the standard protocol for the treatment of DA associated with COVID-19. This conclusion is confirmed by the results of the analysis of the subjective assessment of the treatment performed between patients in the study.

REFERENCES

1. Avtsyn A.P., Zhavoronkov A.A., Rish M.A., Strochkova L.S. Human microelementoses: etiology, classification, organopathology. M.: Medicine, 1991.
2. Danilova E.A., Kist A.A., Osinskaya N.S. Application of neutron activation analysis to assess the elemental status of the human body // Medical Physics, 2008; 36: 73–77.
3. Zhuk L.I., Kist A.A. Mapping the elemental composition of hair // In the book: “Activation analysis. — Methodology and application”. Tashkent: Fan, 1990; 190-201.
4. Matar S, Oul_es B, Sohier P, et al. Cutaneous manifestations in SARS-CoV-2 infection (COVID-19): a French experience and a systematic review of the literature. J Eur Acad Dermatol Venereol, 2020; 34(11): e686-e689. https://doi.org/10.1111/jdv.16775.
5. Schwartzberg LN, Advani S, Clancy DC, Lin A, Jorizzo JL. A systematic review of dermatologic manifestations among adult patients with COVID-19 diagnosis. Skin Health Dis., 2021; 1(2): e20. https://doi.org/10.1002/ski2.20
6. Hui DS, Azhar EI, Madani TA et al The continuing 2019- nCoV epidemic threat of novel coronaviruses to global health— the latest 2019 novel coronavirus outbreak in Wuhan. China Int J Infect Dis., 2020; 91: 264–266. https:// doi. org/ 10. 1016/ 2Fj. ijid. 2020. 01.009 (PMID: 31953166.
7. Jewell NP, Lewnard JA, Jewell BL Caution warranted: using the Institute for health metrics and evaluation model for predicting the course of the COVID-19 pandemic. Ann Intern Med, 2020; 173: 226–227. https:// doi. org/ 10. 7326/ m20- 1565 (PMID:32289150).
8. Galvan Casas C, Catala A, Carretero Hernandez G et al Classification of the cutaneous manifestations of COVID-19: a rapid prospective nationwide consensus study in Spain with 375 cases. Br J Dermatol, 2020; 183(1): 71–77. https:// doi. org/ 10. 1111/ bjd. 19163.
9. Malkud S Telogen effluvium: a review. J Clin Diagn Res., 9(9): WE01- WE03. https:// doi. org/ 10. 7860/ 2FJCDR/ 2F2015/2F152 19. 6492 PMID: 26500992, 2015.
10. Torres F, Tosti A (2015) Female pattern alopecia and telogen effluvium: figuring out diffuse alopecia. Semin Cutan Med Surg, 34(2): 67–71. https:// doi. org/ 10. 12788/j. sder, 2015; 0142 PMID: 26176282.
11. Stenn KS, Paus R Controls of hair follicle cycling. Physiol Rev, 2001; (1): 81: 449–494. https:// doi. org/ 10. 1152/ physr ev. 2001. 81.1.449 PMID: 11152763.