**DYNAMICS OF AGE-RELATED CHANGES IN HOMOCYSTEINE, LIPID PEROXIDATION AND ENDOTOXICOSIS MARKERS IN PATIENTS WITH RED LICHEN PLANUS UNDER THE INFLUENCE OF COMPLEX THERAPY**

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| **About the author:** | T.V. Melnyk |
| **Heading** | CLINICAL OBSERVATIONS |
| **Type of article** | Scentific article |
| **Annotation** | **The objective** of the study: to determine and analyze the level of homocysteine, indicators of the prooxidant-antioxidant system, peptides of medium molecular weight and carbonyl groups of oxidative modified proteins in the blood of patients with lichen planus (LP) depending on age.  **Methods:** general clinical, biochemical, immunoassay and statistical.  **Results.** Significantly increased blood plasma levels of homocysteine, indicators of the prooxidant-antioxidant system and medium molecular weight peptides (MMWP) were found in the patients with lichen planus as compared to the control group. Administration  of complex therapy to patients with LP using sorbent (atoxil), antioxidant (alpha-lipon), vitamins (decamevitis) contributes to the normalization of endotoxicosis (lower levels of homocysteine, carbonyl groups of oxidatively modified proteins and peptides of medium  molecular weight) and peroxide values lipid oxidation (lower levels of malondialdehyde and diene conjugate and increased levels of catalase, superoxide dismutase and SH-groups).  **Conclusions**. A significant increase in the levels of homocysteine, indicators of the prooxidant-antioxidant system, MMWP and carbonyl groups of oxidative modified proteins was found in the patients with LP, being indicative of an essential role of o toxic-metabolic changes in pathogenesis of lichen planus. We found that in the group of patients older than 40 years, the rates of toxic-metabolic disorders are higher than in the group of patients under 40 years of age. The developed method of treatment of decamevitis, alpha-lipon and atoxyl is simple, affordable, effective, and can be used in the practice of a dermatologist. |
| **Tags** | lichen planus, endogenous intoxication, homocysteine, lipid peroxidation, treatment |
| **Bibliography** | * 1.  Bilovol AM, Kolhanova NL. Osoblyvosti porushen lipidnoho obminu u khvorykh na chervonyi ploskyi lyshai [Features of lipid metabolism disorders in patients with red lichen]. Dermatolohiia ta venerolohiia. 2019;3(85):13–14. 2.  Bolotna  LA,  Sarian  OI.  Klinichne  znachennia  hiperhomotsysteinemii  u  khvorykh  na  psoriaz  [Clinical significance of hyperhomocysteinemia in patients with psoriasis]. Dermatolohiia ta venerolohiia. 2014;1(63):29–35. 3.  Bondar SA, Liashenko IN, Trunina TI. Dynamika deiakykh pokaznykiv endotoksykozu u khvorykh na tiazhki ta khronichni rozpovsiudzheni dermatozy v protsesi vykorystannia kompleksnoho metodu endoekolohichnoi reabilitatsii ta korektsii [Dynamics of Some Indicators of Endotoxicosis in Patients  with Severe and Chronic Dermatoses in the Process of Using the Complex Method of Endoecological Rehabilitation and Correction]. Dermatolohiia ta venerolohiia 2003;1(27):37–41. 4.  Butov YuS, Frolov AA, Smolyannikova VA. Klinicheskaya i patogistomorfologicheskaya kharakteristika nekotorykh form krasnogo ploskogo lishaya [Clinical and pathohistomorphological characteristics  of some forms of lichen planus]. Rossiyskiy zhurnal kozhnykh i venericheskikh bolezney. 2000;6:11–18. 5.  Gabrielyan NI, Lipatova VI. Opyt ispol’zovaniya pokazateley srednikh molekul v krovi dlya diagnostiki nefrologicheskikh zabolevaniy u detey [The experience of using indicators of average molecules  in the blood for the diagnosis of nephrological diseases in children]. Laboratornoye delo. 1984;3:138–140. 6.  Gavrilov VB, Mishkorudnaya MI. Spektrofotometricheskoye opredeleniye soderzhaniya gidroperekisey lipidov v plazme krovi [Spectrophotometric determination of the content of lipid hydroperoxides in blood plasma]. Laborotornoye delo.1983;3:33–35. 7.  Denysenko OI, Brodovska NB. Kompleksne likuvannia chervonoho ploskoho lyshaiu iz zastosuvanniam antyoksydantnoho zasobu [Comprehensive treatment of red lichen with the use of antioxidant]. Dermatolohiia ta venerolohiia. 2016;3(73):78–79. 8.  Dovzhanskiy SI, Slesarenko NA. Geneticheskiye faktory v patogeneze krasnogo ploskogo lishaya [Genetic factors in the pathogenesis of lichen planus]. Vestnik dermatologii i venerologii. 1992;9:8–9. 9.  Dorozhenok IYu, Snarskaya ES, Shenberg VG. Komorbidnyye psikhicheskiye rasstroystva u bolnykh krasnym ploskim lishayem [Comorbid mental disorders in patients with lichen planus]. Rosiyskiy  zhurnal kozhnykh i venericheskikh bolezney. 2015;5:38–41. 10.  Zaichko NV. Okyslyuvalʹna modyfikatsiya bilkiv syrovatky krovi yak marker aktyvnosti revmatoyidnoho artrytu ta yiyi zminy pid vplyvom farmakoterapiyi amizonom, indometatsynom, nimesulidom  [Oxidative modification of serum proteins as a marker of rheumatoid arthritis activity and its changes under the influence of pharmacotherapy by amizone, indomethacin, nimesulide]. Visnyk Vinnytsʹkoho derzhavnoho medychnoho universytetu. 2003;7(2/2):664–666. 11.  Kolosova EIu, Melnikov OF. Sostoyaniye lokalnogo immuniteta u bolnykh s krasnym ploskim lishayem slizistoy obolochki rta pri nalichii sakharnogo diabeta II tipa [The state of local immunity in patients with lichen planus of the oral mucosa in the presence of type II diabetes mellitus]. Zhurnal vushnykh, nosovykh i horlovykh khvorob. 2015;4:78–81. 12.  Korolyuk MA, Ivanova LI, Mayorova IG, Tokarev VE. Metod opredeleniya aktivnosti katalazy [Method for determination of catalase activity]. Lab. delo. 1988;1:16–18. 13.  Kostyuk VA, Potapovich AI, Kovaleva ZHV. Prostoy i chuvstvitel’nyy metod opredeleniya aktivnosti superoksiddismutazy, osnovannyy na reaktsii okisleniya kvertsetina [A simple and sensitive  method for determining the activity of superoxide dismutase, based on the oxidation reaction of quercetin]. Vopr. med. khimii. 1990;2:88–91. 14.  Mykytenko DO, Tymenko OI. Molekuliarni osnovy vynyknennia vrodzhenykh vad rozvytku plodu za umov hiperhomotsysteinemii [Molecular basis of congenital malformations in hypergomocysteinemia]. Hihiiena naselenykh mists. Zbirnyk. 2009;53:390–395. 15.  Pentiuk NO, Kharchenko NV. Vplyv hiperhomotsysteinemii ta asotsiiovanykh z neiu metabolichnykh porushen na prohresuvannia fibrozu pechinky u khvorykh na khronichni hepatyty [Influence  of hyperhomocysteinemia and its associated metabolic disorders on the progression of liver fibrosis in patients with chronic hepatitis]. Suchasna hastroenterolohiia, 2010;5:26–32. 16.  Pentiuk OO, Lutsiuk MB, Andrushko II, Postovitenko KP. Metabolizm homotsysteinu ta yoho rol u patolohii [Homocysteine  metabolism and its role in pathology]. Ukr. biokhim. zh. 2003;1:5–17. 17.  Petrova LV, Ylyna LV. Mestnoye primeneniye tsiklosporina A v terapii razlichnykh klinicheskikh form krasnogo ploskogo lishaya slizistoy obolochki rta [Topical use of cyclosporin A in the treatment  of various clinical forms of lichen planus]. Vestnik dermatologii i venerologii. 2005;2:29–31. 18.  Svintsitskyi IA, Lavryk OA. Homotsystein yak odyn z kliuchovykh etiopatohenetychnykh chynnytsiv ryzyku rozvytku ishemichnoi khvoroby sertsia [Homocysteine  as one of the key etiopathogenetic factors for risk of coronary heart disease]. Ukrainskyi naukovo-medychnyi molodizhnyi zhurnal. 2009;1:42–49. 19.  Sviatenko TV, Belozerskaia Yu A. Vazhlyvist urakhuvannia psykhosomatychnykh rozladiv pry likuvanni khvorykh na psoriaz ta chervonyi ploskyi lyshai [The importance of taking into account psychosomatic disorders in the treatment of patients with psoriasis and red planar lichen]. Zhurnal dermatovenerolohyy y kosmetolohyy. 2004;8(1–2):17–118. 20.  Symonova AV, Khamahanova YV, Nazhmutdynova DK. Krasnyy ploskiy lishay: perspektivy novogo podkhoda k terapii i prognozu [Lichen planus: prospects for a new approach to therapy and prognosis]. Rossiyskiy zhurnal kozhnykh i venericheskikh bolezney. 2010;3:39–41. 21.  Skripkin YuK, Butov Yu S. Klinicheskaya dermatovenerologiya [Clinical Dermatovenerology]. T. 2. M.: GEOTAR-Media 2009: 68–116. 22.  Tarasenko SV, Shatokhyn AY, Umbetova KT, Stepanov MA. T-kletochnoye zveno immuniteta v patogeneze ploskogo lishaya slizistoy obolochki rta [T-cell immunity in the pathogenesis of lichen planus of the oral mucosa]. Stomatologiya. 2014;1:60–63. 23.  Timirbulatova  RA,  Seleznev  YEI.  Metod  povysheniya  intensivnosti  svobodnoradikal’nogo okisleniya lipidosoderzhashchikh komponentov krovi i yego diagnosticheskoye znacheniye [Method  for increasing the intensity of free radical oxidation of lipid-containing blood components and its diagnostic value]. Laboratornoye delo. 1981;1:209–211. 24.  Fylymonkova NN, Letaeva OV. Patogeneticheskiye aspekty razvitiya tyazhelykh form krasnogo ploskogo lishaya i metody terapii [Pathogenetic aspects of the development of severe forms of lichen  planus and treatment methods]. Lechashchiy vrach. 2013;10:20–23. 25.  Shevchuk SV, Pentyuk OO, Musin RA, Zaichko NV. Sposib vyznachennya karbonilʹnykh spoluk v syrovattsi krovi [Method for determination of carbonyl compounds in serum]. Deklaratsiynyy patent na vynakhid Y58110A, Ukrayina, MPK 7 A61K35/16. № zayavky 2002107890; Zayavl. 04.10.2002; Opubl. 15.07.2003; Byul. № 7. 26.  Shenberh VH, Snarskaia ES, Doozhenok YIu. Krasnyy ploskiy lishay i psikhosomaticheskiye rasstroystva [Lichen planus and psychosomatic disorders]. Rossiyskiy zhurnal kozhnykh i venericheskikh  bolezney. 2016;2:125. 27.  Iurchenko PO, Melnyk AV, Zaichko NV, Yoltukhivskyi MM. Osoblyvosti obminu homotsysteinu ta hidrohen sulfidu v tsentralnii nervovii systemi [Features of Homocysteine  and Hydrogen Sulfide  Exchange in the Central Nervous System]. Medychna khimiia. 2014;16(3):90–96. 28.  Aly DG, Shahin RS. Oxidative stress in lichen planus. Acta Dermatovenerol Alp Panonica Adriat. 2010;1:3–11. 29.  Brodovska NB, Denysenko OI. A study of cytokine content in the blood serum of patients with lichen ruber planus. Archives of the Balkan Medical Union. 2018;53(3):349–354. 30.  Criado PR, Ramos De Oliveira R, Vasconcellos C, Jardim Criado RF. Two case reports of cutaneous adverse reactions following hepatitis В vaccine: lichen planus and granuloma annulare. JEADV.  2004;18:603–606. 31.  Drago F, Rebora A. Cutaneous immunologic reactions to hepatitis В virus vaccine. Ann Intern. Med. 2002;136:780. 32.  Ellman GL. Tissue Sulfhydryl groups. Arch of Bioch and Biophys. 1956;82:70–77. 33.  Fahy CMR, Torgerson RR, Davis MDP. Lichen planus affecting the female genitalia: A retrospective review of patients at Mayo Clinic. J Am Acad Dermatol. 2017;77(6):1053–1059. 34.  Katta R. Lichen planus. Am Fam Physicians. 2000;61:3319–3328. 35.  Sher A, Coffman RL. Regulation immunity to parasites by T-cells and T-cell-derived cytokines. Ann Rev Immunol. 1992;10:385–409. 36.  Wenzel J, Tüting T. An IFN-associated cytotoxic cellular immune response against viral, self-, or tumor antigens is a common pathogenetic feature in «interface dermatitis». J Invest Dermatol.  2008;128(10):2392–2402. 37.  Zaichko NV, Nekrut DO, Lutsyuk MB, Artemchuk MA. Analysis of some homocysteine contradictions. Reports of Vinnytsia National Medical University. 2018;22(1):233–237. |
| **Publication of the article** | «DERMATOLOGY AND VENEREOLOGY» №1(87), 2020 year,32-38 pages,  index UDK  *616.516–092–036.1–085:577.12* |
| **DOI** | 10.33743/2308-1066-2020-1-32-38 |