



THE EFFECT OF MINERAL HYDROCARBONATE WATERS ON MICROTOPOGRAPHY OF LYMPH NODE AND DIPHTHECAL LYMPHOID TISSUE IN THE GASTRIC WALLS (LITERATURE REVIEW)

Akramova Nargiza Akhtamovna

Chair of Rehabilitation Medicine, Sports Medicine and Physical Education
Bukhara State Medical Institute

Article history:

Received: October 7th 2021
Accepted: November 7th 2021
Published: December 14th 2021

Abstract:

. At the present time in balneology, balneology and a number of medical institutions mineral waters of different chemical composition are widely used (ingestion, baths, various combinations of effects) for therapy and rehabilitation of patients. Among them, a significant percentage in the clinic of internal lesions, are gastroenterological patients, most of whom need to receive mineral waters, acting therapeutically on the digestive organs, immune and lymphatic systems.

Keywords: Diffuse Lymphoid Tissue, Mineral Hydrocarbonated Waters, Experimental Animals, Stomach

AIM OF THE REVIEW:

The study of the literature sources of mineral hydrocarbonated waters as well as microtopographic features of the structure of lymphoid nodules and diffuse lymphoid tissue in the walls of the stomach

INTRODUCTION:

Mineral waters are used in diseases of the stomach, intestines and liver. However the influence of hydrological factors on morphology of lymphoid formations of the stomach, on their cellular structure, structure of mucous membrane and its structures (glands, cells, connective tissue, haemomicrocirculatory and lymphatic channel etc.) up to recently are not studied. The greatest scientific interest is the identification of the details of the mechanisms of the therapeutic action of fresh and mineral waters and heat carriers of contact application, as well as the results of these actions. In-depth research of lymphoid formations and lymphatic channel of the stomach will allow to specify regularities of morphogenesis and occurring changes of immune organs at use of mineral waters in sanatorium-resort treatment, and also in the plan of human health improvement. This will undoubtedly help effective therapy and prevention of lesions of the stomach and intestines in resorts, sanatoriums and in everyday life taking into account successes of therapeutic lymphology, lymphosanation, endoecological rehabilitation. The purposeful research of parameters of lymphoid formations of some organs under influence of mineral medicinal waters is the actual problem of modern medicine, rehabilitation lymphology and immunology. The stomach occupies a special place in the digestive system. It is known that

its mucous membrane is in direct contact with food, microorganisms and products of their life activity that have genetically alien features. Numerous lymphoid masses in the form of nodules as well as diffusely scattered lymphocytes are located in this membrane of this organ. However, their topography, number, and variability are virtually unreported in either the national or foreign literature, although sanitation by immune organ stimulation should be recognised as an important activity in prophylactic lymphology.

A large number of studies are devoted to the effects of drinking mineral waters on mucous membrane receptors, gastric acidity, gastrointestinal motility, bile formation, electrolyte metabolism and hormone levels. At the same time the effect of mineral waters on the immune system has clearly received much less attention.

According to N.S. Gorbunov 2004 the choice of stomach for the research is dictated by the fact, that 35% of people suffer from various diseases of this organ, gastritis and peptic ulcer constitute the predominant part of patients, and at the same time the information about the fine structure of lymphoid structures of the stomach walls in the scientific literature is extremely insufficient. The lymphoid tissue and the structure of the layers of the gastric wall under the influence of mineral waters of different chemical composition are even less investigated. Disclosure of mechanisms of such influence at sanatorium-resort and balneological influence on immune organs will allow to allocate rational, qualitative and effective ways of treatment, prevention, dispensary and rehabilitation of gastroenterological patients. The primary task of morphologists studying lymphoid organs, in our



opinion, is to bring the available factual material into conformity with new theoretical ideas and to pass to purposeful studying of the questions having applied value for immunology requirements. In this respect it is of interest to find out the influence of sanatorium-resort factors on immunological indices of a human organism, to reveal mechanisms of structural adaptation of an organism to numerous balneo- and physiotherapeutic factors. The study of the morphology of the lymphatic channel and various regional lymph nodes with regard to natural and preformed spa and physical factors, as well as the achievements of preventive lymphology seems to be particularly important.

Drinking mineral waters have a significant therapeutic effect and their mechanism of action is mainly determined by their direct influence on the digestive organs. It has already been stated that mineral waters have a very high impact on metabolism and neurohumoral regulation. However, many morphological aspects of the peripheral immune organs (lymph nodes of the stomach, intestines) are not sufficiently studied and need careful further research and, despite the large amount of physiological data accumulated in recent years on the mechanisms of curative action of spa and physical factors, many aspects of the effect of mineral waters on the human body remain undisclosed.

In this regard, it seems very promising to study the effects of mineral water intake on the structure of the gastric wall (clarification of histotopography of lymphoid tissue and gastric glands). At the same time, scientifically substantiated use of therapeutic mineral waters (drinking, baths, their combination) will obviously allow to correct treatment taking into account the state and action of immune mechanisms of the organism. It should also be noted that, according to Y.N. Korolev et al. (1993), drinking iodine-containing waters have a protective effect under radiation exposure and have no toxic effects.

The Republic of Uzbekistan possesses rich and unique sources of medicinal mineral waters of federal importance (located on the territory of UP "Juyzar health centre" in kishlak Sarhang, in Raboti Kalmok KFI, Bukhara district, Bukhara oblast). However, the effects of these therapeutic sources on the morphology of immune organs have not been studied and the morphological regularities that occur in organs and systems, including the digestive, respiratory, immune and others, have not yet been described. In this regard, the study of the lymphoid structures of the stomach, as a frequent object of damage (gastritis, peptic ulcer, etc.), in this respect seems to be very important, because, in fact, in the special literature such data are absent.

We plan to carry out studies making a significant contribution to deciphering the effects of balneological factors on the body. The obtained new data on morphological changes of lymphoid formations in the walls of the stomach can be used by balneologists, clinicians, gastroenterologists, experimentalists to decipher therapeutic and preventive aspects of balneological procedures, and also to clarify adaptive mechanisms of lymphoid tissue and immunocorrection, so necessary in theoretical and practical medicine. The results received at morphological research of gastric lymphoid formations, can be used in educational and scientific literature in the field of balneology, balneology and adjacent fields.

CONCLUSIONS:

Thus, being based on the analysis of data of literature and enquiries of practical public health services, balneology and balneology it is possible to note, that the developed problem is actual and timely, it obviously deserves the purposeful and profound research.

LITERATURE:

1. Adilov V.B., Eliseev V.A., Puzanov A.V. Siliceous mineral waters of the south of Western Siberia and their therapeutic use // Problems of Balneology, Physiotherapy and Physical Therapy 2001. - № 2. - С.41-43
2. I., Gelfond N.E., Astashov V.V., Starkova E.V., Shuvaeva O.V. Effect of drinking water on the mineral composition of body fluids in ontogenesis. // All-Russian conf. 5th. Mats. Novosibirsk.- 2002- P.-182-1
3. Knyshova V.V. Effect of bromine-containing mineral water on the state of peroxidation methods and antioxidant protection factors in experimental gastroduodenitis. //Vopr.resor.fizioterapy i LFC. 2002 - №2 - С.34-36
4. Otto H., Gerlers'L, Laissie le.a. Zur Punctionellen bedeutung des intestinalen immunosystem. Z. Gastoent, 2015 Bd, 20, №3, S. 245-256
5. Pratel K.J. Фармакодинамика и токсикология серосодержащих лечебных сред, применяемых в бальнеотерапии. // Вопр. курортологии, физиотерапии и лечебной физической культуры, 2014 № 1 - С. 6-13
6. . Ray W.A. Особенности гемодинамики желудка и их роль в патогенезе язв желудка. Автореф. докт. дисс. мед. наук. М..2007- 35с.



7. Reddy N.P. Lymph circulation: physiology, pharmacology and biomechanics // Grit. Rev. Biomed. End, 2012. v. 14 - № 1. p. 45-91
8. 253. Staffed A., Miani C., Bergancini A.M. //Acfa Otorhinolaryngol. Italia, 1998 -" v. 18-№ 4 p. 233-238
9. . Schmidt-Kessen W. //Arch. phus. Ther 2019 - Bd.21. - № 5. - S. 305-311
10. Schorter R., Me Gill D., Bahn R.C. Cytotoxicity of mononuclear cells for antologous colonic epithelial cells in colonic diseages. // Gastroenterology -2014. -v. 86-№ 1-p. 12-22
11. Smith R.P., Gosselm R.E. Hydrogen sulfide poisoning. // J. occup. Med. -2015 v.24 -p.93-97
12. Spencer I., McDonald T.T., Finn T., Isaacson P.G. The development gut -associated lymphoid tissue in the terminal ileum of fefal human intestine. // Clin. Exp. Immunol. 2016. - v. 64. - p. 536-543
13. Waksman B.H. The homing pattern of thynens dereved in calf and neonatal % mouse Peyer's patches // J. Immunol. 2013 -v. 111 - p. 878-884
14. . Weiss R.F. Механизмы действия бальнеотерапии. // Журнал «Топ-медицина».2015 - №4 - С. 30-31
15. Wood I.D. Gastrointestinal neuroimmune interactions // Advances in the innervation of the gastrointestinal tract // Excerpta medica, Amsterdam; London, New-Jork, Tokyo.2012- S. 15