Results. In the course of the study, in a group of patients with a primary brain tumor (n=50), the polymerase chain reaction method revealed that in 38 % of the cases EBV DNAwas detected, and in 4 % CMV DNAwas found.HSV DNA 1, 2 typeswas not detected.The following data were obtained during the enzyme immunoassay.When examining 50 patients for antibodies to herpes simplex virus 1, 2 types, immunoglobulin G (IgG) was detected in 86 % of cases, immunoglobulin M (Ig M) in 6 %. Twentynine patients were diagnosed with Ig M and Ig G to the immediate protein (IEA) of the cytomegalovirus, in 6,9 % of casesIg M to IEA CMVwas found, in 17,24 % Ig G to IEA CMV. Ig G was detected in 45,5 % of casesof the 33 people who were tested for herpesvirus6type,.Twentyone patients underwent examination for detection of Ig G to the cytomegalovirus, which was detected in 95,94 % of cases.

The conclusion. As a result of the study,EBV DNA(38 %) and CMV DNA(4 %) weredetectedby PCR method.Immunoenzyme analysis showed the presence of immunoglobulin G to HSV 1, 2 types (86 %), IEA CMV (17,24 %), CMV (95,94 %) and HHV6 type (45,5 %); also immunoglobulins M to IEA CMV (6,9 %), HSV 1, 2 types (6 %) in the group of patients with primary brain tumor.

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THE INFLUENCE OF VARIED LEVEL OF PHYSICAL ACTIVITY ON THE BIOLOGICAL AGE OF YOUNG PEOPLE

V. Mikhno, O. Ablekovskaya

Belarusian State University, ISEI BSU,
Minsk, Republic of Belarus
vik.mikhno@gmail.com

This article is devoted to the state of young people, as well as the influence of different levels of physical activity on biological age. The results of the study indicate a high degree of aging of the studied people compared with the mean values. The dependence between biological age and the level of motor activity was identified. In general, the findings show the need to alter the way of life of students, to encourage physical education and sports.

Keywords: biological age, premature aging, physical activity, students.

One of the main problems of our time is the problem of improving and maintaining the health of students. According to the results of numerous studies, recent years revealed the reduction in the standard of health and lack of motor activity among young people. This is largely due to the large learning load, the inability to organize the working day properly, the predominance of a passive lifestyle, etc. In such conditions, it is important to perform the primary diagnosis of individual health risk factors. The assessment of biological age copes with this aim rather well. It serves quite an accurate indicator and characterizes the health status and the effectiveness of adaptation to unusual ecological and occupational conditions. A significant advance or retardation in the biological age of the organism in relation to the actual age can be interpreted as a sign of a decline in the level of health and its functional reserve.

The purpose of the study is to determine the biological age of students with different levels of motor activity.

The study involved 24 young men and 36 girls aged 18 to 21 years. The researched students formed two groups: the control group, which included the students who had the usual learning load (4 hours of physical training per week according to the timetable), and the experimental group, which included young men and women who attended various sports clubs more than 4 hours per week in addition to general curriculum. In order to collect the necessary information a questionnaire was used. It included questions about bad health habits, the length of physical activity and the type of activity. The biological age of the students of both groups was determined according to the method of V. Voitenko.

In the course of the study, it was revealed that young men from the control group had the highest level of premature aging. Thus, at an average actual age of 19,5 ± 0,4 years, their biological age reached 31,1 ± 1,5 years, while in young men from the experimental group with an average age of 19,5 ± 0,5 years, the biological age was

25, 9 ± 1,9 years. Compared with boys, girls of both groups had a slower aging rate: in the control group at an average actual age of 19,5 ± 0,4 years, their biological age reached 28,6 ± 1,6 years. At the same time, in girls from the experimental group at an average age of 19,5 ± 0,5 years, the biological age was 24,0 ± 1,3 years (P <0,05).

The evaluation of the aging rate of students showed that in neither of the groups there were students with a distinct slow aging rate (the difference is from –15 to –10), whereas only boys and girls from the experimental group – 9 % and 16 %, respectively, had a slow aging rate (the difference is from –8,9 to –3). 53 % of the experimental group members have their approximate biological age, which is two times more than in the control group. Needless to say that the main part of the students of the control group (61 % of boys and 47 % girls) show a distinctively rapid aging rate, while in the experimental group this is observed in 36% of young men and 21 % of girls.

Thus, the study showed signs of premature aging in all studied groups of students. At the same time, the indicators of the biological age of students depend on the level of regular weekly physical activity.

PROGNOSTIC SIGNIFICANCE OF MOLECULAR PROFILING OF COLORECTAL CANCER

E. Moduleva, R. Smolyakova, E. Shpadaruk

Belarusian State University, ISEI BSU,
Minsk, Republic of Belarus
kmoduleva@mail.ru

In the course of the study there were determined the levels of expression of TP and TS genes, characterizing tumor sensitivity to drug treatment in patients with colorectal cancer.

Keywords: colorectal cancer, level of expression, tumor sensitivity, disease prognosis.

The issue of the day of modern oncology and proctology is a colorectal cancer (CRC), the increase of morbidity of which is related to a great extent with worsening of ecological situation in the Republic of Belarus.One of the modern approaches to choosing an individual program for treating patients with malignant neoplasms and predicting the course of the disease is the study of molecular-biological markers in tumor tissue. The determination of these markers in the tumor can provide additional information about the biological behavior of the tumor: its rate of growth, the ability to invade and metastasize, and resistance to chemotherapy drugs [1].

Thymidylphosphorylase (TP) is an angiogenesis factor − increased expression of this enzyme is associated with an unfavorable prognosis of the course of the disease [2]. Elevated levels of thymidylatesynthetase (TS) of colorectal cancer are associated with worse prognosis and resistance to chemotherapy [3].

Materials and methods. The material for the study was the data on 50 patients suffering from colorectal cancer who received treatment at the "Republican Scientific and Practical Center of Oncology and Medical Radiology. N. N. Alexandrov "from 2014 to 2016 years.

In the course of the work performed, patients with colorectal cancer were assessed for expression levels of TP and TS genes by real-time PCR using the Bio-Rad iQ5 (USA) amplifier.

In the course of the study, the overexpression of the TP gene was 6.90 r.u, the hypoexpression was 0,94 r. u. As a result of the studies, the elevated level of expression of the TS gene was 2,01 r. u., the low level of expression was 1,54 r. u.

Hyperexpression of the TP gene was observed in 40 % of patients, a low level of expression was found in 54 % of patients. In the group of patients with recurrent disease, moderate expression was observed in 66,8 % of cases, without recurrence – in 33,2 % of cases.

The high level of expression of the TP gene characterizes the sensitivity of the tumor to the preparations of the fluoropyrimidine series and indicates a favorable prognosis of the course of the disease.

Hyperexpression of the TS gene was detected in 56 % of patients, a low level of expression was observed in 38 % of patients. In the group of patients with recurrent disease, overexpression was observed in 83,4 %, without recurrence – in 26,6 % of cases.

High levels of TS gene expression in 83,4 % of patients indicate tumor resistance to drug therapy using 5-fluorouracil and tomudex and a high risk of recurrence of the disease.

Thus, high levels of TP gene expression in 40 % of patients and low levels of TS gene expression in 38 % of patients indicate the sensitivity of the tumor to ongoing drug therapy and favorable course of the disease.