PERSPECTIVES OF GENETIC METHODS OF STUDY IN DENTISTRY

M. O. Kushnirenko, M. I. Khomyk, O. V. Litynska
Ivano-Frankivsk National Medical University, Ukraine

Most dental pathologies are multifactorial, and the trigger mechanism of their occurrence may be some diseases in organs and systems of the human body. Such dental diseases as caries, periodontitis, systemic hypoplasia of enamel could have been prevented.

Materials and Methods. Informative methods in this direction are: clinical-genealogical method of pedigrees, which is based on the tracing of a disease or a sign in the family, indicating the family ties between members of the pedigree and their genealogical analysis; dermatoglyphic study of relief muscles on the fingers, palms, and the foot surfaces of the feet; associative bonds of blood groups of ABO, Rh, HLA, Lewis, MN and B1 systems with various dental diseases; functional state of the genotype (FSH), which is an objective criterion for assessing the degree of cellular metabolism and the severity of various diseases. The following indicators of FSH are studied: chromosome index (IX), sex chromatin (CX), nucleolar index (NI) and pathological nuclei (PYA); morphodensitometry, which includes morphometry and spectrometry of cells and nuclei.

Results. Genetic study (metaphysical analysis of associations of macrocytic chromosomes (AHA)) of 23 healthy individuals and 34 somatically healthy with GP of chronic course of the I degree was carried out. Age of patients was from 22 to 44 years. Results AHA groups D and G. The two, three, and four associations of acrocentric cells (AA) were identified on all metaphase plates. In men with HF, the average frequency of AH of group D with two AAs was: before treatment, 10.39%, after - 16.22%, that is, it increased 1.56 times, with three AA: before treatment 3.9%, after - not
diagnosed; group G - with two AAs: up to - 15.58%, after - 16.22%, ie increased by 1.04 times, with three AA: up to - 1.3%, after - not diagnosed.

Conclusions. Results demonstrated differences in the AHA in patients with dental pathology.

Perspectives. The extension of primary prevention of multifactorial diseases through the discovery of genetic markers, which are closely associated with the genes of predisposition.

Key words: genetic markers, associations of acrocentric chromosomes, dental diseases.

Accepted for printing on 29 Oct 2017