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Clinical significance of the assessment of polymorphism of the genetic markers of the diabetes mellitus type II in view of cardiovascular abnormalities in workers of dusty production

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It is known that there are higher cardiovascular abnormality prevalence and the mortality caused by this abnormality in employees exposed to increased levels of dust in comparison with the prevalence and mortality in general population. Therefore, the genetic status recording will allow preventing early health declining for the employable population.

Examines the relationship of polymorphism of different markers of genetic predisposition to diabetes mellitus type 2 with abnormalities in carbohydrate metabolism and occupational diseases are 40 employed (the average age of 51.7 ± 1.29 years) in terms of exposure to elevated concentrations of dust and inorganic fluorine compounds.

We have found the association of IGF2BP2 gene polymorphism (TT genotype) with the development of diabetes mellitus type 2 ($p=0.015$), and the association of gene polymorphism CDKAL1 (genotype GG) with abnormalities of carbohydrate metabolism ($p=0.023$), including diabetes mellitus type 2 ($p=0.027$). Gene polymorphism CDKAL1 (genotype GG) in addition to carbohydrate metabolism disorders association with the presence of an occupational disease fluorosis stage 2 ($p=0.032$). Thus, this genetic marker can be used as a predictor not only of development of disorders of carbohydrate metabolism, but also occupational diseases are working in conditions of exposure to harmful factors, which will continue to assess genetically determined risk of data breaches and to find an individual approach to the development of preventive and therapeutic measures in workers of hazardous industries.

Biography

Obukhova T. Y. She received the degree of candidate of medical Sciences in 2006 in Yekaterinburg medical University. She works as a senior research fellow in Yekaterinburg research center for prophylaxis and health protection of industrial workers, has published more than 60 scientific papers and is a member of the Sverdlovsk regional society of occupational diseases.

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