

ANALYSIS OF ENVIRONMENTAL AND HERITABLE RISK FACTORS OF CANCER OF THE KIDNEY

D. Brisyk, E. Smirnova

Belarusian State University, ISEI BSU,

Minsk, Republic of Belarus

adrianna.briska@gmail.com

e.smirnova@tut.by

Work is devoted to identification of risk factors of cancer of kidney by method of questioning of persons of the having this pathology and voluntary participants of a research without kidney cancer.

Keywords: kidney cancer, heredity, risk factors.

Currently, incidence rates for cancer worldwide are growing steadily, due to the increased level of anthropogenic pollution of the environment, poor nutrition, bad habits, harmful working conditions and the improvement of diagnostic methods. Kidney cancer is no exception – in recent years in the Republic of Belarus there is a tendency to a steady increase in the incidence of this disease. Thus, in 2008 12.0 cases per 100 thousand population were detected, while in 2015 almost three times more – 26.0 per 100 thousand.

Taking into account that increase in the incidence of kidney cancer begins at the age of 40, it reaches high values in the working age and the peak of deaths occur in the age group of 60-64 years [1, 2], establishing the causes and mechanisms of the disease is relevant.

Kidney cancer, like most other forms of cancer pathology, refers to multifactorial diseases, in the etiopathogenesis of which contribute both genetic and environmental factors. Currently, several groups of kidney cancer risk factors have been identified [3].

Among the factors of lifestyle, a special place is occupied by smoking and excessive alcohol consumption. It is proved that the risk of kidney cancer in smokers of both sex groups increases by 60% compared to non-smokers, and in case of smoking cessation the probability of developing the disease decreases [3].

A special group of risk factors are socially significant diseases such as hypertension, obesity and diabetes. They increase the risk of kidney cancer by 20% [3, 4]. Given that these conditions often accompany each other, it is difficult to assess the isolated impact of each of them on the development of kidney cancer.

Studies point to an increased risk of kidney cancer in patients with chronic pyelonephritis, end-stage renal disease, and renal cysts, while the role of urinary tract infections is questioned [4, 5].

Contact with industrial dyes, oil and its derivatives, heavy metal salts and industrial pesticides also increases the risk of this pathology [2, 3].

The share of hereditary forms in the structure of kidney cancer incidence is 3–4% and currently genetic disorders typical for a number of hereditary syndromes (Von Hippel-Lindau syndrome, Burt-Hogg-Dyube syndrome, hereditary papillary carcinoma of the 1st type, hereditary paraganglioma and others) are revealed, which are inherited mainly by autosomal dominant type and one of their manifestations is kidney cancer [6].

It should be noted that many of these factors can be eliminated by changing the lifestyle or drug therapy, which significantly expands the possibilities of prevention.

As part of the thesis it is planned to identify the prevalence of risk factors for kidney cancer by questioning people with this pathology, as well as voluntary participants in the study without kidney cancer in history.

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