

SMOKING HABITS, CADMIUM EXPOSURE AND VULNERABILITY TO CHEMICALS OF LUNG ADENOCARCINOMA MALE PATIENTS IN VOJVODINA

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Introduction

The American Cancer Society estimates that each year, more people die of lung cancer than of colon, breast, and prostate cancers combined. It is evaluated that 87% lung cancers are non-small cell cases, out of which 52% are adenocarcinoma. During their lifetime, 1 in 15 men will be affected by lung cancer and the risk for the smokers is higher.

Experimental

In this research 28 male patients (39-77 years old) with inoperable IIIB and IV stadium of adenocarcinoma, diagnosed in the Institute for Pulmonary Diseases of Vojvodina, Serbia were enrolled. The patients were asked to fulfil questionnaire regarding their exposure to chemicals during lifetime and their smoking habits. The presence of cadmium (Cd) was determined by ICP-MS in their morning urine samples.

Results and discussion

More than one third of the included patients, 35.71% (10/28) had been exposed to various chemicals during their education or in their free time, while 32.14% (9/28) have been exposed to chemicals professionally. The list of chemicals includes ammonia, mineral acids, pesticides, petroleum products, paints, varnishes, glues and organic solvents. Only 2 of them have not been smoking during their lifetime, while 92.86% (26/28) reported that have been or had been heavy cigarette smokers who had started to smoke on average at the age of 19.6 years. As ex-smokers were registered 57.14% (16/28) patients who had been smoking on average for 38 years 25.83 cigarettes a day. Active smokers who were included in this study 35.71% (10/28), smoke on average 29.17 cigarettes daily. Cd was detected in 53.57% (15/28) of total urine samples, 62.50% (10/16) of ex-smokers versus 40.00% (4/10) active smokers.

Conclusion

In this study for the first time, the exposure to chemicals and smoking habits among lung adenocarcinoma male patients in Western Balkan Region are reported.

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