Streszczenie w języku angielskim

The distinctiveness of lung cancer course in women

Every year 2,5 million new cases of lung cancer are diagnosed and it remains the main cause of death of oncological diseases (approximately 1,8 million cases a year). The incidence of lung cancer in patients monitored globally is 9,4 % in women and 15,2 % in men, whereas the morality is estimated at 13,5 % in women and 22,7 % in men. Nonetheless, the problem of lung cancer in women seems to be underestimated. Over the years smoking has been the main risk factor for lung cancer responsible for approximately 85 % of cases. Other risk factors, particularly important in women include, i.a., passive effects of cigarette smoke, effects of radon, asbestos, air pollution, coal and wood combustion in households, the impact of estrogens and genetic factors. A basis for a reliable diagnosis of primary lung cancer is the result of histopathological examination. The choice of a treatment method is determined by the degree of clinical advancement according to the TNM classification, taking into account the patient's general condition and comorbidities. The principles of diagnosis and treatment of lung cancer are the same for women and for men. Lung cancer is, yet, commonly perceived as men's illness. Women are less frequently referred for clinical trials and constitute a small percentage of those tested in screening tests.

The aim of the study was to present current data on lung cancer in women, clinicopathological characteristics of non-small cell lung cancer (NSCLC) operated women, clinical, sociodemographic and psychological analysis of women with lung cancer compared to men.

The series of publications consists of 4 articles: one review and three original articles.

Publication number 1 is an introduction to the subject and is an up-to-date summary of the problem of lung cancer in women, focused on epidemiology, tobacco smoking, the incidence of lung cancer in non-smoking women and the impact of other risk factors including, i.a., genetic factors and the influence of estrogens.

Publications number 2 and 3 consist in a retrospective analysis of patients undergoing lung cancer surgical treatment, sourced from the database of the Polish Lung Cancer Group (PLCSG).

A group of 17 192 patients after radical resection was analyzed. A higher percentage of non-smokers was found among women (36,1 % vs. 26,0 %, $p<0,001$). Men were significantly more likely to have a history of comorbidities. In both groups, adenocarcinoma

was the dominant histological type and occurred more frequently in women (67,4 % vs. 50,7 %, p<0,001). Some differences were found in the type of procedures performed in women and in men. Women were diagnosed at earlier stages of the disease compared to men. In a univariate analysis, a significantly higher survival rate was found in women than in men. Women had better 5-year survival compared to men both for adenocarcinoma and squamous cell carcinoma (66 % vs. 53 %, p<0,0001 and 65 % vs. 51 %, p<0,0001, respectively), for both smokers and non-smokers (65 % vs. 52 %, p<0,0001 and 65 % vs. 51 %, p < 0,0001, respectively), all age groups, and all stages (IA1 to III B).

Due to the fact that publication number 2 demonstrated a higher survival rate for operated women than for men, the next publication (number 3) includes a detailed evaluation of surgically treated women, divided into younger (≤55 years of age) and older ones. 11 460 women were included in the study. The dominant histological type in the studied groups of women was adenocarcinoma, the incidence of which was 74,3 % in the group of younger women compared to older women: 63,9 % (p<0,05). In both groups, the history of smoking was comparable. The predominant stage in both groups was stage IB, while stage III was more common in the group of younger women than in the older patients. The univariate analysis showed a higher 5-year survival rate in the group of younger women than in the group of older women. Postoperative complications were more frequently observed in the group of older women.

Finally, publication number 4, as a continuation of the analysis of the problem of differences in lung cancer in women, compares the characteristics of women and men referred for lung cancer treatment. For the purpose of obtaining a broader perspective, patients were analyzed not only in terms of clinical aspects, but also sociodemographic and psychological ones. Additional 100 patients (50 women and 50 men) were included in the study. Data were collected on the basis of a questionnaire completed by patients themselves. Psychological assessment was performed based on self-completed questionnaires on the Perceived Stress Scale (PSS-10) and the Acceptance of Illness Scale (AIS). Other clinical data were obtained from medical records. The vast majority of patients in both groups had a history of smoking (women: 84 %, men: 98 %, median pack-years: 22,5 vs. 45 (p<0,05). No statistically significant differences were found between women and men in terms of demographic data. In the psychological assessment questionnaires (PSS-10 and AIS), comparable results were obtained in both groups. Women more often declared their willingness to seek support from a psychologist or psychiatrist due to lung cancer, but did not decide

to consult the above specialists more often than men. While comparing the methods of treatment, it was found that immunotherapy was used less frequently in women.

To sum up, lung cancer in women is an important and current clinical problem. The analysis of large groups of studied patients indicates that women surgically treated with NSCLC, compared to men, were younger, smoked cigarettes less often, were diagnosed more often at a lower clinical stage and with a predominant diagnosis of adenocarcinoma. If surgical treatment is undertaken, the prognosis in women is better than in men, the problem also affects women at a younger age. The results of this study constitute a premise for increased oncological vigilance, including women in screening tests and clinical trials with the need to revise the criterion of exposure to cigarette smoke.