Analiza stanu zdrowia oraz ocena ryzyka chorób nowotworowych wśród młodych mieszkańców wsi
The analysis of health condition and the assessment of the risk of neoplastic diseases among residents of villages

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Streszczenie

Wprowadzenie: Choroby nowotworowe zostały zakwalifikowane do chorób cywilizacyjnych, stanowiąc ogromny problem współczesnej medycyny. Według danych pochodzących z International Agency for Reserch of Cancer ok. 10 mln ludzi choruje na nowotwory złośliwe, a liczba zgonów z tego powodu przekroczyła 6 mln, a do 2020 r. liczby te mogą ulec podwojeniu. W Polsce uzyskuje się pięcioletnie przeżycia w 22% mężczyzn i 35% kobiet chorych na nowotwory, zaś w krajach Europy północnej i zachodniej wskaźnik wyleczeń dotyczy 40% mężczyzn i 50% kobiet. Główną przyczyną niekorzystnej sytuacji w Polsce jest niski odsetek wczesnych rozpoznań nowotworów złośliwych. Przyczyna takiego stanu jest z jednej strony niedostateczne przygotowanie zarówno lekarzy rodzinnych jak i innych specjalności, a z drugiej niewystarczające upowszechnienie metod wczesnego rozpoznania.

Cel pracy: Celem pracy jest analiza stanu zdrowia oraz ocena ryzyka wystąpienia choroby nowotworowej wśród mieszkańców wsi.

Materiał i metody: Badaniami objęto 1000 mieszkańców wsi zamieszkałych na terenie województwa podkarpackiego. Wiek badanych waha się od 18 do 30 lat, średnia wartość wieku wynosi 26,96±0,84 (zakres [18;30], mediana 25,95%CI [18,9;29,01]). Badaną grupę stanowi 43,8% kobiet i 56,2% mężczyzn. W celu pozyskania materiału badań w pracy wykorzystano standaryzowany arkusz badania podmiotowego i przedmiotowego pozwalający na ocenę dolegliwości zgłaszanych podczas wywiadu oraz analizę objawów wskazujących na zmiany chorobowe, w tym nowotworowe.

Wyniki: Z analizy danych wynika, iż w ciągu ostatnich kilku miesięcy dolegliwości odczuwane przez badanych to kaszel (8,22% K, 7,12% M), duszność (3,2% K, 1,78% M;), bóle brzucha (13,7% K, 4,27% M), ból (5,48% K, 2,14% M;) oraz osłabienie (14,61% K, 4,98% M). U jednej osoby płci żeńskiej podczas obserwacji rozpoznano cechy czerniak (0,46%), co zostało potwierdzone w późniejszym badaniu dermatologicznym.

Wnioski: Nie zauważono zmian w jamie ustnej świadczących o chorobie nowotworowej.

Co szósty badany ma powiększone węzły chłonne, najczęściej podżuchwowe lub szyjne, w większości przypadków występuje ich bolesność.

Summary

Introduction: Neoplastic diseases have been classified as civilization diseases and are a big problem for modern medicine. According to the data from the International Agency for Research of Cancer, about 10 million people suffer from cancer and a number of deaths due to this disease has exceeded 6 million; until 2020 those numbers may double. In Poland, cancer survivors of five years concern 22% of men and 35% of women suffering from tumours, while in northern and western Europe there is a cure rate of 40% for men and 50% for women. The main reason for the adverse situation in Poland is a low percentage of early diagnosis of cancer. On the one hand this results from insufficient preparation of both family doctors and physicians of other specialties, but on the other, from insufficient dissemination of early diagnosis methods.

Objective: The objective of the study is to analyze the health condition and to assess the risk of a neoplastic disease among residents of villages.

Material and methods: The research involved 1000 residents of villages in Podkarpackie Voivodeship. The age of the researched ranges from 18 to 30 years, with mean age 26.96±0.84 (range [18;30], median 25.95%CI [18,9;29,01]). The researched group is represented in 43,8% by women in 56,2% by men.

In order to obtain the research material, a standardized questionnaire has been applied including interview and physical examination, enabling assessment of symptoms reported during the interview and analysis of symptoms indicating a disease, including cancer.

Results: According to the data analysis, during last few months the respondents have suffered from such ailments as cough (8.22% W, 7.12% M), dyspnea (3.2% W, 1.78% M), abdominal pain (13.7% W, 4.27% M), pain (5.48% W, 2.14% M) and weakness (14.61% W, 4.98% M). During observations, one female respondent was diagnosed with symptoms of melanoma (0.46%), which has been confirmed in later dermatological test.

Conclusions: No changes in oral cavity suggesting neoplastic disease have been noticed. Every sixth respondent has enlarged lymph nodes, most frequently submandibular or neck's lymph nodes, and in the majority of cases it's accompanied by pain.

Introduction

Neoplastic diseases have been classified as civilization diseases and are a major problem for modern medicine. According to WHO's report of 2003, tumours will be the greatest danger 21st century. It is predicted that within the first decade of the current century one person out of 900 adults aged 18-44 yrs will be a convalescent after a neoplastic disease from childhood [1, 2, 3, 4]. According to the data from the International Agency for Research of Cancer, about 10 million people suffer from cancer and a number of deaths due to this disease has exceeded 6 million; until 2020 those numbers may double [5].

Number of cases of neoplastic diseases in Poland has been increasing for years faster than population. These diseases are a cause of about 40% of deaths in women and about 30% in men aged 45-65. In the USA and in the Western Europe countries, peak incidence is observed in older age groups [6]. Malignant tumours are the second frequent cause of death among people aged 65 and more and are a cause of 22.5% of deaths in this age group [7, 8]. In Poland, cancer survivors of five years concern 22% of men and 35% of women suffering from tumours, while in northern and western Europe there is a cure rate of 40% for men and 50% for women.

The main reason for the adverse situation in Poland is low percentage of early diagnosis of cancer. On the one hand this results from insufficient preparation of both family doctors and physicians of other specialties, but on the other, from insufficient dissemination of early diagnosis methods. In many developed countries the effectiveness of malignant tumours prevention has been considered as a civilization progress indicator. It has been proved that primary and secondary prevention, as well as increased accessibility to early detection

methods and use of scientific achievements increase the possibility of prevention, detection, early diagnosis and effective treatment [6].

Aim of the study

The objective of the study was to analyze the level of knowledge on tumours and their prevention among residents of villages.

Material and methods

The research involved 1000 residents of villages in Podkarpackie Voivodeship. The age of the researched ranges from 18 to 30 years, with mean age 26.96±0.84 (range [18;30], median 25.95%CI [18,9;29,01]). The researched group is represented in 43,8% by women in 56,2% by men. Preparation and conduct of the research lasted from 2007 to 2016.

In order to obtain the research material, a standardized questionnaire has been applied including interview and physical examination, enabling assessment of symptoms reported during the interview and analysis of symptoms indicating a disease, including cancer.

All the statistical calculations have been performed by use of data analysis software system STATISTICA developed by StatSoft, Inc. (2011), version 10.0. www.statsoft.com., statistical package R version 2.15.1, and Microsoft Excel spreadsheet. Quantitive variables have been characterised by arithmetic mean, standard deviation, median, minimum and maximum value (range), and 95% CI (confidence interval). Qualitative variables have been presented by use of cardinality and percentage value. In statistical analysis the following tests have been applied: Shapiro-Wilk, Levene, Brown-Forsythe, Student's t-distribution, Mann-Whitney U, ANOVE F-test, and Kruskal-Wallis.

Results

The study attempted to determine if a neoplastic disease has occurred in respondents' families. According to the data, 34.40% of respondents state that a neoplastic disease has occurred in their family, including 43.24% of women and 26.2% of men. Statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p<0.0001, a neoplastic disease occurs more frequently in families of female respondents. The most frequent is lung tumour (9.30%) according to 12.06% of women and 6.74% of men. Statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.0045). Equally frequent is breast cancer (5.10%), 9.15% of women and 1.35% of men. Statistically significant differences in frequencies have been proven, Fisher's 2-sided

exact test, p<0.0001). Cases of leukaemia in family have been confirmed by 0.90% of respondents, 1.46% of women and 0.39% of men. No statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.1806). Cases of melanoma have been indicated by 1% of all respondents, including 1.25% of women and 0.77% of men. No statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=1.0000). Colorectal cancer was indicated by 1.30% of respondents , 1.46% of women and 1.16% of men. Statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.0012). Brain tumour has occurred in respondents' families in 1.10% of cases, 1.46% of women and 0.77% of men. No statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.7663). Prostate cancer has occurred in 0.80% of the families, 1.25% of women and 0.39% of men. No statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.2899). Incidence of cervical cancer in family has been indicated by 1.20% of respondents, 1.66% of women and 0.77% of men. No statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=1.0000). Liver cancer has occurred in 1.30% of cases, including women (1.25%) and men (1.35%). No statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.1641).

While assessing a degree of relationship it has been proved that a neoplastic disease has occurred in 3.20% of respondents' parents, 3.74% of women and 2.7% of men. No statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.8589). In 22.10% of cases, tumour has occurred in grand-parents, in 29.11% of women and 15.61% of men. Statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p<0.0001). Tumours in distant family represent 14%, 33.68% of women and 8.48% of men. Statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.0081). Very rare occurrence of tumours has been reported among siblings (0.50%).

According to the data analysis, during last few months the respondents have suffered from such ailments as cough (8.22% W, 7.12% M; no statistically significant differences, Fisher's 2-sided exact test, p=0.7343), dyspnea (3.2% W, 1.78% M, no statistically significant differences, Fisher's 2-sided exact test p=0.3814), slight temperature (2.74% W, 0.00% M; statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.0068), fever (1.83% W, 0.36% M; no statistically significant differences, Fisher's 2-sided exact test, p=0.1735), nausea (4.11% W, 0.36% M; statistically significant differences

in frequencies have been proven, Fisher's 2-sided exact test, p=0.0062), vomiting (0.91% W, 0.00% M; no statistically significant differences, Fisher's 2-sided exact test, p=0.1914), constipation (2.28% W, 0.00% M; statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.0157), abdominal pain (13.7% W, 4.27% M; statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.0003), pain (5.48% W, 2.14 M; no statistically significant differences, Fisher's 2-sided exact test, p=0.0545), weakness (14.61% W, 4.98% M; statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.0003), malaise (2.28% W, 1.42% M; no statistically significant differences, Fisher's 2-sided exact test, p=0.5142) and poorer concentration (0.91% W, 0.36% M; no statistically significant differences, Fisher's 2-sided exact test, p=0.584). Other reported ailments are as follows: changeable moods (8.22% W, 2.85% M; statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.0083), fatigability (0.91% W, 0.36% M; no statistically significant differences, Fisher's 2-sided exact test, p=0.584), breaking out in sweats (2.28% W, 1.42% M; no statistically significant differences, Fisher's 2-sided exact test, p=0.5142), and limping (0.46% W; 0.36% M; no statistically significant differences, Fisher's 2-sided exact test, p=1.0000) (table 1).

Table 1. Descriptive statistics occurrence of symptoms in the study group by sex

		sex=F	sex=M	general	p
cough		N=438	N=562	N=1000	0,7343
	no(N/%)	402/91,78%	522/92,88%	924/92,4%	
	yes(N/%)	36/8,22%	40/7,12%	76/7,6%	
dyspnoea		N=438	N=562	N=1000	0,3814
	no(N/%)	424/96,8%	552/98,22%	976/97,6%	
	yes(N/%)	14/3,2%	10/1,78%	24/2,4%	
subfebrile body temp.		N=438	N=562	N=1000	0,0068
	no(N/%)	426/97,26%	562/100%	988/98,8%	
	yes(N/%)	12/2,74%	0/0,00%	12/1,2%	
fever		N=438	N=562	N=1000	0,1735
	no(N/%)	430/98,17%	560/99,64%	990/99%	
	yes(N/%)	8/1,83%	2/0,36%	10/1%	
nausea		N=438	N=562	N=1000	0,0062
	no(N/%)	420/95,89%	560/99,64%	980/98%	
	yes(N/%)	18/4,11%	2/0,36%	20/2%	
vomiting		N=438	N=562	N=1000	0,1914
	no(N/%)	434/99,09%	562/100%	996/99,6%	
	yes(N/%)	4/0,91%	0/0,00%	4/0,4%	
constipation		N=438	N=562	N=1000	0,0157
	no(N/%)	428/97,72%	562/100%	990/99%	
	yes(N/%)	10/2,28%	0/0,00%	10/1%	
abdominal pain		N=438	N=562	N=1000	3,00E–04
	no(N/%)	378/86,3%	538/95,73%	916/91,6%	
	yes(N/%)	60/13,7%	24/4,27%	84/8,4%	
pain		N=438	N=562	N=1000	0,0545
	no(N/%)	414/94,52%	550/97,86%	964/96,4%	
	yes(N/%)	24/5,48%	12/2,14%	36/3,6%	
strength reduction		N=438	N=562	N=1000	3,00E–04
	no(N/%)	374/85,39%	534/95,02%	908/90,8%	
	yes(N/%)	64/14,61%	28/4,98%	92/9,2%	
discomfort		N=438	N=562	N=1000	0,5142
	no(N/%)	428/97,72%	554/98,58%	982/98,2%	
	yes(N/%)	10/2,28%	8/1,42%	18/1,8%	
worse concentration		N=438	N=562	N=1000	0,584
	no(N/%)	434/99,09%	560/99,64%	994/99,4%	
	yes(N/%)	4/0,91%	2/0,36%	6/0,6%	
changing moods		N=438	N=562	N=1000	0,0083
	no(N/%)	402/91,78%	474/97,15%	948/94,8%	
	yes(N/%)	36/8,22%	16/2,85%	52/5,2%	
fatigue		N=438	N=562	N=1000	0,584
	no(N/%)	434/99,09%	560/99,64%	994/99,4%	
	yes(N/%)	4/0,91%	2/0,36%	6/0,6%	
profuse perspiration		N=438	N=562	N=1000	0,5142
	no(N/%)	428/97,72%	554/98,58%	982/98,2%	
	yes(N/%)	10/2,28%	8/1,42%	18/1,8%	
limping		N=438	N=562	N=1000	1,0000
	no(N/%)	436/99,54%	560/99,64%	996/99,6%	
	yes(N/%)	2/0,46%	2/0,36%	4/0,4%	
other		N=438	N=562	N=1000	0,0003
	no(N/%)	364/83,11%	526/93,59%	890/89%	
	yes(N/%)	74/16,89%	36/6,41%	110/11%	

The average value of weight parameter in a group of women is 58.2±13.53 (range [38;182], median 56.95% CI [56,39;60]), in a group of men 68.28±11.5 (range [46;110], median

67.95%CI [66,93;69,63]) and total 63.86±13.39 (range [38;182], median 62.95%CI [62,69;65,04]). Mann–Whitney U test demonstrated that the value of weight in the group of women is significantly lower in comparison to the group of men (value of test statistics U-12868.5, p <0.0001). The average value of height parameter in the group of women is 163.64±11.67 (range [54;179], median 164.95%CI [162,09;165,2]), I the group of men 176.57±7.92 (range [102;196], median 176.95%CI [175.64;177,5]), and total 170.91±11.66 (range [54;196], median 172.95%CI [169,88;171,93]). Mann–Whitney U test demonstrated that the value of height in the group of women is significantly lower in comparison to the group of men (value of test statistics U-4902, p<0.0001) (table 2).

Table 2. Descriptive statistics of measurable variables in the study group by sex

		sex=K	sex=M	General	p
weight		N=438	N=281	N=500	
	s.e.mean.±	58,2±13,53	68,28±11,5	63,86±13,39	<0,0001
	range	[38;182]	[46;110]	[38;182]	
	median	56	67	62	
	95%CI	[56,39;60]	[66,93;69,63]	[62,69;65,04]	
growth		N=438	N=281	N=500	
	s.e.mean.±	163,64±11,67	176,57±7,92	170,91±11,66	<0,0001
	range	[54;179]	[102;196]	[54;196]	
	median	164	176	172	
	95%CI	[162,09;165,2]	[175,64;177,5]	[169,88;171,93]	

In the group of researched women, 48.33% are of asthenic build, 46.41% of athletic build, and 5.26% of pyknic build. In the group of men, 58.92% are of asthenic build, 39.83% of athletic build, and 1.24% of pyknic build. Statistically significant differences in frequencies have been proven (value of chi-squared test 9.27, df=2, p=0.0097). Asthenic build is significantly more frequent in the group of men (value of chi-squared test 4.64, p=0.0312), while pyknic build is significantly more frequent in the group of women (value of chi-squared test 4.74, p=0.0295). During observations of skin, naevi were observed in 1.83% of women and 2.14% of men, acne in 6.39% of women and in 18.15% of men, where statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.0001, and skin discolouration that has occurred in 4.11% of women and 2.49% of men. During observations, one female respondent was diagnosed with symptoms of melanoma (0.46%), which has been confirmed in later dermatological test. In assessment of hair look and condition, excessive hair loss was diagnosed in 2.74% of women and 1.42% of men (no statistically significant differences, Fisher's 2-sided exact test, p=0.3456). Dryness of hair was diagnosed only in 5.48% of women (statistically significant differences in frequencies have been proven, Fisher's 2-sided

exact test, p<0.0001), and an excessive brittleness of hair only in women (3.2%, statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.0029). During observations of nails, discolourations were observed in 2.28% of women and 1.07% of men (no statistically significant differences, Fisher's 2-sided exact test, p=0.3066). Moreover, an excessive brittleness of nails was observed (6.39% W, 0.36% M; statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.0001). According to the research analysis, in the researched group occurs asymmetry of the spine and concerns 4.11% of women and 4.63% of men, which provides no statistically significant differences, Fisher's 2-sided exact test, p=0.8295). During spine examination, rounded back was diagnosed in the group of men (1.42%; no statistically significant differences, Fisher's 2-sided exact test, p=0.1351). In both groups, one shoulder blade being lower than the other was diagnosed (1.83% W, 0.36% M), however, no statistically significant differences, Fisher's 2-sided exact test, p=0.1735. Assessment of oral cavity condition leads to diagnosis that dental caries concerns 17.35% of women and 13.88% of men (no statistically significant differences, Fisher's 2-sided exact test, p=0.3184), occlusion defects 8.22% of female respondents and 2.49% of male respondents (statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.006). Moreover, enlarged tonsils were observed in 1.83% of women and in 0.71% (no statistically significant differences, Fisher's 2-sided exact test, p=0.4118) and coating on the tonsils in 0.91% of women. During examination of thyroid, its enlargement was diagnosed in 0.46% of the researched women and 0.36% of men (no statistically significant differences, Fisher's 2-sided exact test, p=1.0000). During examination of abdominal cavity, no disturbing changes were observed. During examination of lymph nodes in women, cervical lymph nodes (5.02%) and lymph nodes behind ears (7.31%) were enlarged and painful (0.46%). In the group of men, lymph nodes behind ears were enlarged in 0.71% of the examined, while cervical lymph nodes in 1.42%. Statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.0001, p=0.0313. Moreover, painful cervical lymph nodes were reported (0.36%). No statistically significant differences, Fisher's 2-sided exact test, p=1.0000. Enlarged submandibular lymph nodes occurred in 17.35% of women and 8.54% of men. Statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.0039. Painfulness of submandibular lymph nodes was reported by 0.46% of female respondents and 1.07% of male respondents. No statistically significant differences, Fisher's 2-sided exact test, p=0.6350. Enlarged lymph nodes in neck were observed in 2.74% of women and 1.07% of men. No statistically significant differences, Fisher's 2-sided exact

test, p=0.1891. Enlarged lymph nodes in armpit occurred in the group of women (0.91%). Enlarged lymph nodes in groin occurred in 0.46% of women (table 3).

Table 3. Descriptive statistics of variables relating to the lymph nodes in the group by gender

	sex=K	sex=M	General	p
painful nuchal lymph nodes	N=438	N=562	N=1000	1,0000
no(N/%)	438/100%	560/99,64%	998/99,8%	
yes(N/%)	0/0,00%	2/0,36%	2/0,2%	
lymphadenopathy submandibular	N=438	N=562	N=1000	0,0039
no(N/%)	362/82,65%	514/91,46%	876/87,6%	
yes(N/%)	76/17,35%	48/8,54%	124/12,4%	
painful lymph submandibular	N=438	N=562	N=1000	0,6350
no(N/%)	436/99,54%	556/98,93%	992/99,2%	
yes(N/%)	2/0,46%	6/1,07%	8/0,8%	
lymphadenopathy cervical lymph nodes	N=438	N=562	N=1000	0,1891
no(N/%)	426/97,26%	556/98,93%	982/98,2%	
yes(N/%)	12/2,74%	6/1,07%	18/1,8%	
painful cervical lymph nodes	N=438	N=562	N=1000	–
no(N/%)	438/100,00%	562/100,00%	1000/100%	
yes(N/%)	0/0,00%	0/0,00%	0/0,00%	
lymphadenopathy axillary l.n.	N=438	N=562	N=1000	0,1914
no(N/%)	434/99,09%	562/100%	996/99,6%	
yes(N/%)	4/0,91%	0/0,00%	4/0,4%	
painful axillary lymph nodes	N=438	N=562	N=1000	–
no(N/%)	438/100,00%	562/100,00%	1000/100%	
yes(N/%)	0/0,00%	0/0,00%	0/0,00%	
lymphadenopathy inguinal lymph nodes	N=438	N=562	N=1000	0,4380
no(N/%)	436/99,54%	562/100%	998/99,8%	
yes(N/%)	2/0,46%	0/0,00%	2/0,2%	
painful inguinal lymph nodes	N=438	N=562	N=1000	–
no(N/%)	438/100,00%	562/100,00%	1000/100%	
yes(N/%)	0/0,00%	0/0,00%	0/0,00%	

During respiratory system test no disturbing changes were observed. One female participant was observed to suffer from cough (0.46%), dyspnea (0.46%), and sputum (0.46%), which was related to present viral infection. Average value of pulse parameter in the group of women is 81.93±12.62 (range [50;125], median 80.95%CI [79,98;83,87]), in the group of men 74.23±15.04 (range [50;136], median 70.95%CI [71,85;76,62]), and total 78.19±14.35 (range [50;136], median 78.95%CI [76,61;79,77]). Mann–Whitney U test demonstrated that the pulse value in the group of women is significantly higher in comparison to the group of men (value of test statistics U-17451.5, p<0.0001). Average value of systolic blood pressure parameter in the group of women is 120.54±9.51 (range [98;156], median 120.95%CI [119,13;121,95]), in the group of men 123.06±12.72 (range [90;179], median 121.95%CI [121,21;124,9]), and total 121.83±11.32 (range [90;179], median 120.95%CI [120,66;123]).

No statistically significant differences (Mann–Whitney U test, value of test statistics U-14529, p = 0.0766). Average value of diastolic blood pressure in the group of women is 74.49±8.08 (range [50;104], median 75.95%CI [73,29;75,69]), in the group of men 73.18±8.6 (range [50;105], median 73.95%CI [71,94;74,43]), and the total 73.82±8.37 (range [50;105], median 75.95%CI [72,95;74,69]). No statistically significant differences (Mann–Whitney U test, value of test statistics U-18144.5, p = 0.0581). No symptoms of nervous system were observed and meningism were negative. Headaches and vomiting were declared by one female respondent (0.46%). No statistically significant differences, Fisher's 2-sided exact test, p=0.4380). The study attempted to identify relationship between ailments that occur in the researched group of young people and neoplastic disease in family. Among all the respondents with neoplastic disease in family history the following symptoms occurred: cough (9.94%, no statistically significant differences, Fisher's 2-sided exact test, p=0.1602), dyspnea (3.31%, no statistically significant differences, Fisher's 2-sided exact test, p=0.3666), slight temperature (1.66%, no statistically significant differences, Fisher's 2-sided exact test, p=0.6725), fever (2.21%, no statistically significant differences, Fisher's 2-sided exact test, p=0.0601), nausea (3.87%, statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.0408), vomiting (0.55%, no statistically significant differences, Fisher's 2-sided exact test, p=1.0000), constipation (1.66%, no statistically significant differences, Fisher's 2-sided exact test, p=0.3577), abdominal pain (12.15%, statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.0287), pain (4.42%, no statistically significant differences, Fisher's 2-sided exact test, p=0.4632), weakness (13.26%, statistically significant differences in frequencies have been proven, Fisher's 2-sided exact test, p=0.0236), malaise (1.1%, no statistically significant differences, Fisher's 2-sided exact test, p=0.4985) and poorer concentration (1.1%, no statistically significant differences, Fisher's 2-sided exact test, p=0.2979). Other reported ailments occurring in the group with the disease history in family are as follows: changeable moods (5.52%, no statistically significant differences, Fisher's 2-sided exact test, p=0.8355), fatigability (0.55%, no statistically significant differences, Fisher's 2-sided exact test, p=1.0000), breaking out in sweats (1.66%, no statistically significant differences, Fisher's 2-sided exact test, p=1.0000) (table 4).

Table 4. Characteristics of discomfort in the group according to the incidence of cancer in the family investigated

	cancer in the family =no	cancer in the family =yes	General	p
cough	N=362	N=638	N=1000	0,1602
no(N/%)	598/93,73%	326/90,06%	924/92,4%	
yes(N/%)	40/6,27%	36/9,94%	76/7,6%	
dyspnoea	N=362	N=638	N=1000	0,3666
no(N/%)	626/98,12%	350/96,69%	976/97,6%	
yes(N/%)	12/1,88%	12/3,31%	24/2,4%	
subfebrile body temp.	N=362	N=638	N=1000	0,6725
no(N/%)	632/99,06%	356/98,34%	988/98,8%	
yes(N/%)	6/0,94%	6/1,66%	12/1,2%	
fever	N=362	N=638	N=1000	0,0601
no(N/%)	636/99,69%	354/97,79%	990/99%	
yes(N/%)	2/0,31%	8/2,21%	10/1%	
nausea	N=362	N=638	N=1000	0,0408
no(N/%)	632/99,06%	348/96,13%	980/98%	
yes(N/%)	6/0,94%	14/3,87%	20/2%	
vomiting	N=362	N=638	N=1000	1
no(N/%)	636/99,69%	360/99,45%	996/99,6%	
yes(N/%)	2/0,31%	2/0,55%	4/0,4%	
constipation	N=362	N=638	N=1000	0,3577
no(N/%)	634/99,37%	356/98,34%	990/99%	
yes(N/%)	4/0,63%	6/1,66%	10/1%	
abdominal pain	N=362	N=638	N=1000	0,0287
no(N/%)	598/93,73%	318/87,85%	916/91,6%	
yes(N/%)	40/6,27%	44/12,15%	84/8,4%	
pain	N=362	N=638	N=1000	0,4632
no(N/%)	618/96,87%	346/95,58%	964/96,4%	
yes(N/%)	20/3,13%	16/4,42%	36/3,6%	
strength reduction	N=362	N=638	N=1000	0,0236
no(N/%)	594/93,1%	314/86,74%	908/90,8%	
yes(N/%)	44/6,9%	48/13,26%	92/9,2%	
discomfort	N=362	N=638	N=1000	0,4985
no(N/%)	624/97,81%	358/98,9%	982/98,2%	
yes(N/%)	14/2,19%	4/1,1%	18/1,8%	
worse concentration	N=362	N=638	N=1000	0,2979
no(N/%)	636/99,69%	358/98,9%	994/99,4%	
yes(N/%)	2/0,31%	4/1,1%	6/0,6%	
changing moods	N=362	N=638	N=1000	0,8355
no(N/%)	606/94,98%	342/94,48%	948/94,8%	
yes(N/%)	32/5,02%	20/5,52%	52/5,2%	
fatigue	N=362	N=638	N=1000	1,0000
no(N/%)	634/99,37%	360/99,45%	994/99,4%	
yes(N/%)	4/0,63%	2/0,55%	6/0,6%	
profuse perspiration	N=362	N=638	N=1000	1,0000
no(N/%)	626/98,12%	356/98,34%	984/98,2%	
yes(N/%)	12/1,88%	6/1,66%	18/1,8%	
limping	N=362	N=638	N=1000	0,5372
no(N/%)	634/99,37%	362/100%	996/99,6%	
yes(N/%)	4/0,63%	0/0,00%	4/0,4%	
other	N=362	N=638	N=1000	0,1387
no(N/%)	578/90,6%	312/86,19%	890/89%	
yes(N/%)	60/9,4%	50/13,81%	110/11%	

Discussion

In health condition assessment, as well as in neoplastic diseases prevention, interview is a very important element that can be a form of early prevention. About 5%-10% of tumours is conditioned by strong genetic factors, i.e. congenital genetic defect, and people genetically determined are born with a defect of one tumour suppressor gene. Development of hereditary tumours proceeds with similar mutations as in sporadic tumours, however, one mutation less is needed for the disease to occur. This fact explains a younger age of patients falling ill with strongly hereditarily conditioned tumours. Half of the offspring are carriers of mutated genes, however, it does not mean that they will suffer from cancer. In neoplastic diseases prevention, it is very important to identify families in high-risk group and provide them with appropriate care. Increased risk of neoplastic diseases is reported in people, whose closest relatives have suffered from cancer and also in whose families an oncological disease has occurred in at least two generations [7-13]. The research has proved that the frequency of incidence of a neoplastic disease in respondents' families is 34.40% and most frequently concerns grandparents (22.1%). The most frequent tumour is lung tumour (9.30%) and breast cancer (5.10%).

According to the 2012 health condition report, in Europe, Poland is a country of low incidence and high mortality rate due to cancer. It is estimated that in 2008 140.8 thousand of people fell ill and 92.6 thousand died. Common tumours make about 50% of all cases, including lung cancer 20% (58.9/100 thousand). The next are breast cancer (36.4/100 thousand), colorectal cancer (36.3/100 thousand), and prostate cancer (27.2/100 thousand). Lung cancer was also the most frequent cause of death in Poland (50.9/thousand) [14].

In general health condition examinations, in order to detect early symptoms of neoplastic disease, the most important is knowledge of the most characteristic symptoms suggesting a neoplastic disease. According to professor M. Matysiak (2003), the majority of tumours in an early stage of the disease proceeds with few or no symptoms. Therefore, it is extremely important to conduct an interview and physical examination very carefully and not to ignore such symptoms as: fever, headaches, bone pain, enlarged lymph nodes, especially if there is no fever and no reaction to anti-inflammatory treatment, chronic discharge from the ear, abdominal pain, increased waist circumference, chronic constipation or diarrhoea, vaginal bleeding or hematuria [15,16]. B. Zalewska–Szewczyk and J. Bodalski (2003) enumerate groups of symptoms that need to be given attention in neoplastic diseases prevention: visible

or perceptible deformation during palpation, tumours in different body parts, asymmetry in the look of limbs, torso and other parts; continuing enlargement of lymph nodes, especially if the lymph nodes are hard and painless; localized pain, especially if continues for more than two weeks; recurring, not reacting to treatment airway infections, continuing cough, hoarseness; increased ICP – morning headaches, vomiting, convulsions, loss of consciousness, increased head circumference in babies; body weight loss; bleeding from genitourinary system or from alimentary canal; purpura; change of behaviour – increasing tiredness, aggressive behaviours or strange behaviours [17,18,19,20]. The purpose of this research was to assess the level of risk of tumours basing on physical examination that makes it possible to detect symptoms of neoplastic disease. Analysis of the collected results has demonstrated that in the researched group no changes in oral cavity suggesting a neoplastic disease have been observed, discolourations occur only in 3.20%, while naevi in 2.0% of participants. 0.2% of the researched was diagnosed with symptoms of melanoma, which has been confirmed in later dermatological test. No disturbing changes have been observed on nails and in hair. The most frequently enlarged lymph nodes were submandibular (12.40%) and neck lymph nodes (1.8%), and only in a few cases they were painless. A similar research has been conducted in Great Britain by Fern L. A. et al. in 2011, which attempted to create a programme of shortening the diagnosis time among patients, where cancer is the main cause of non-random death at the age between 15 and 24. According to the researchers, quick notice of alarming symptoms that may suggest a neoplastic disease and then sending someone to consult a doctor may become a way of early and quick cancer diagnosis. Disturbing symptoms were observed in 4% of the researched and most frequently they were unexplained pain (34.8%), unexplained tiredness (14.5%) and nodules (13.4%). 267 doctor consultations in basic health care took place, during which two benign tumours have been diagnosed [18-20].

Moderately high incidence and high mortality rate among men, as well as low incidence and high mortality rate among women characterize Poland as a country significantly affected by neoplastic diseases and National Cancer Control Porgram does not bring satisfactory results [14]. Regular analysis of patients' health condition provides not only a general assessment but also may be a form of an early prevention in neoplastic diseases. Thorough physical examination performed in a defined way may become a significant form in the up to now activities that, despite present efforts, are still insufficient and scattered in Poland [14].

Conclusions

1. Skin condition test has shown occurrence of pigmentary naevi requiring further observation and melanoma symptoms confirmed in the further examination.

2. No changes in oral cavity suggesting neoplastic disease have been observed.

3. Every sixth respondent has enlarged lymph nodes, most frequently submandibular or neck's lymph nodes, and in the majority of cases it's accompanied by pain.

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