



using HRT requires “regular medical checkups and a yearly evaluation of the condition of mammary glands ...” – these are recommendations of the Polish Gynaecological Association with regard to the application of Hormonal Replacement Therapy [13].

## MATERIAL AND METHODS

The aim of the study was to establish a correlation between the incidence of breast cancer and the use of hormonal replacement therapy received before. The survey included 566 women, with a distinction between healthy women and women with breast cancer (354 and 212, respectively). The healthy women were chosen by means of the sampling method, while the women with cancer were patients after mastectomy staying at four Lublin hospitals. The 1<sup>st</sup> group of the surveyed denotes the healthy women while the 2<sup>nd</sup> – the women after mastectomy. The method of a diagnostic survey was applied, with the use of a questionnaire. The collected material underwent a statistical analysis in the form of the  $\chi^2$  test.

## RESULTS

Hormonal replacement therapy is one of the methods used by women for alleviating the symptoms of menopause. The question about how the of the women dealt with the symptoms of this condition was answered in the following way: more than half of the women in the studied groups claimed not to apply any methods (62.1%, 66.2%). The use of HRT was declared by 23.4% of healthy women and 20.4% of women with cancer (Table 1).

Table 1. Ways of alleviating menopause symptoms

Alleviating symptoms	Healthy (1 <sup>st</sup> )		With cancer (2 <sup>nd</sup> )	
	N	%	N	%
Using HRT	24	23.4	32	20.4
Using non-hormonal medications bought in a chemist's shop	6	5.8	10	6.4
Healthy lifestyle	9	8.7	11	7.0
I did not use any methods	64	62.1	104	66.2

Hormonal replacement therapy used continuously can become a risk factor for breast cancer [Figs. 1–2]. The method turned out to be the factor creating a statistical difference between the surveyed groups of women. The women with cancer indeed used this method of alleviating symptoms of menopause more often ( $p < 0.01$ ).

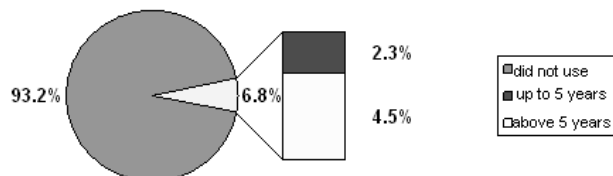


Fig. 1. The use of HRT by healthy women

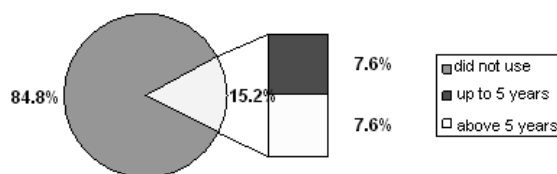


Fig. 2. The use of HRT by women with cancer  
The statistical significance among the two groups [ $\chi^2 = 11.91 (**)$   $p < 0.01$ ]

A highly significant correspondence was found between the age of the surveyed and the use of hormonal therapy both in the 1<sup>st</sup> and the 2<sup>nd</sup> groups of women ( $p < 0.001$ ). The table below demonstrates that the number of women who used HRT in order to mitigate their menopause symptoms increases with age (Table 2).

Table 2. The use of HRT versus the age of the respondents

The use of HRT	Healthy (1 <sup>st</sup> )						With cancer (2 <sup>nd</sup> )					
	Age						Age					
	35-44	%	45-54	%	>=55	%	35-44	%	45-54	%	>=55	%
Did not use	195	98.5	99	94.3	36	70.6	30	96.8	71	94.7	79	74.5
Up to 5 years	1	0.5	1	0.9	6	11.8	1	3.2	1	1.3	14	13.2
Above 5 years	2	1.0	5	4.8	9	17.6	0	0	3	4.0	13	12.3
Total	198	100	105	100	1	100	31	100	75	100	106	100
Significance	$\chi^2 = 52.14 (***)$ $p < 0.001$						$\chi^2 = 18.52 (***)$ $p < 0.001$					

In the 1<sup>st</sup> group of the surveyed, the oldest women ( $\geq 55$ ) most often confirmed the use of HRT for a period longer than 5 years (17.6%). The situation was similar in the group of women with cancer; however, the percentage was slightly lower, i.e. 12.3%. A weak statistical diversity was found among women with cancer with regard to the occurrence of breast/ovary cancer in the family in the period of using hormonal replacement therapy ( $p < 0.05$ ). Women after mastectomy with the risk of breast cancer in the family used HRT for a longer period of time (15.1%) than women without such a risk (5%) (Table 3).

Table 3. The use of HRT versus the incidence of breast/ovary cancer in the family

The use of HRT	Healthy (1 <sup>st</sup> )				With cancer (2 <sup>nd</sup> )			
	Cancer in the family				Cancer in the family			
	occurred	%	did not occur	%	occurred	%	did not occur	%
Did not use	34	89.5	296	93.7	41	77.4	139	87.4
Up to 5 years	1	2.6	7	2.2	4	7.5	12	7.6
Above 5 years	3	7.9	13	4.1	8	15.1	8	5.0
Total	38	100	316	100	53	100	159	100
Significance	$\chi^2 = 1.16 (-)$ $p > 0.05$				$\chi^2 = 5.80 (*)$ $p < 0.05$			

In the case of healthy women, no significant correlations between the surveyed features was found ( $p > 0.05$ ).

## DISCUSSION

Apart from the undoubtedly high benefits of using a hormonal replacement therapy, some unfavourable effects may also occur in the form of a higher risk of developing breast cancer, despite the positive attitudes of women towards applying the therapy. Thus, one of the factors determining a negative decision in terms of using this type of therapy is the fear of acquiring breast cancer [4, 10].

In the authors' own study, women after mastectomy used HRT for the period of 5 years or longer more often than the healthy women. The WHI survey results [18] point to an increased risk of acquiring cancer in the fifth year of hormonal therapy. In the authors' survey the type of applied therapy was not taken into consideration; however, the rise of risk connected with using the therapy for more than 5 years was also reported by Schairer et al. [15], Ross et al. [14], or Weiss et al. [19].

Moreover, a family history of breast cancer was related to the applied therapy significantly more often for a period longer than 5 years. Sellers et al. [16], in turn, pointed out that using HRT by women with a family history of cancer was not significantly connected with the rise of breast cancer incidence as well as with a decline of mortality rate.

In the survey carried out by Żołnierczuk-Kieliszek and Pacian [21] concerning approaches of healthy women to HRT, this method of alleviating menopause symptoms was applied by 30.7% women, while in the authors' own study – by 23.4% women.

The statistical analysis of the survey confirmed the existence of a highly significant correspondence as far as the influence of age on the use of HRT is concerned. Women aged above 55 chose this method more often. The findings of Bałanda and Gozdek [3] were similar, i.e. the group of women using HRT aged 51–60 was more numerous than the group of younger women (14.8% and 10.9%, respectively).

Zgliczyński and Wiktorowicz-Dudek [20] point out to a small number of women using HRT in Poland (as compared to Sweden or the US). Yet, their findings present a nearly 3 factor increase (from 2.5% to 7.2%) of women using this method in the years 1994–1999, which is connected with the informative actions of the Polish Menopause and Andropause Society.

## CONCLUSIONS

1. The use of hormonal replacement therapy turned out to be a breast cancer risk factor in the researched group – women who developed cancer significantly more often applied the method for more than 5 years as compared to healthy women

2. Using HRT for more than 5 years was considerably more often associated with a family history of breast cancer.

3. A variable significantly influencing the use of hormonal therapy turned out to be age. In the surveyed population, the percentage of women using HRT rises together with age.

## REFERENCES

1. Antoine C., Liebens F., Carly B. et al.: Influence of HRT on prognostic factors for breast cancer: A systematic review after the Women's Health Initiative trial. *Human Reproduction*, 19(3), 741, 2004.
2. Asendrych A., Deptała A.: Hormonalna terapia zastępcza w nowotworach hormonozależnych. *Współczesna Onkologia*, 8(2), 81, 2004.

3. Bałanda A., Gozdek N.: Postawy kobiet wobec klimakterium i hormonalnej terapii zastępczej. *Pielęgniarstwo XXI wieku*, 5, 79, 2003.
4. Bednaruk-Młyński E., Wójcik-Tomaszewska J., Jassem J.: Hormonalna Terapia Zastępcza, a ryzyko rozwoju raka piersi w świetle nowych doniesień. *Nowotwory*, 50(5), 519, 2000.
5. Beral V.: Million Women Study Collaborators. Breast cancer and hormone –replacement therapy in the Million Women Study. *Lancet*, 362, 419, 2003.
6. Collaborative Group on Hormonal Factors in Breast Cancer. Breast Cancer and hormone replacement therapy: collaborative reanalysis of data from 51 epidemiologic studies of 52.705 women with breast cancer and 108.411 women without breast cancer. *Lancet*, 350, 1047, 1997.
7. Dębski R.: Kontrowersje wokół hormonalnej terapii zastępczej. *Przewodnik Lekarza*, 4, 38, 2002.
8. Dumitrescu R. G., Cotarla I.: Understanding breast cancer risk-where do we stand in 2005?. *Journal of Cellular and Molecular Medicine*, 9 (1), 208, 2005.
9. Dworniak T.: Rak sutka – profilaktyka. *Nowa Klinika*, 10 (5/6), 535, 2003.
10. Gozdek N., Bałanda A.: Lekarze ginekolodzy i położne wobec hormonalnej terapii zastępczej. *Zdrowie Publiczne*, 113(3/4), 268, 2003.
11. Kanadys W. M.: Hormonalna terapia zastępcza ciągłych kontrowersji. *Przegląd Menopauzalny*, 2, 30, 2004.
12. Million Women Study Collaborators. Breast Cancer and hormone replacement therapy in the Million Women Study. *Lancet*, 362, 419, 2003.
13. Rekomendacje Zarządu Głównego PTG w sprawie stosowania Hormonalnej Terapii Zastępczej (10.07.2004). *Ginekologia Polska*, 9, 675, 2004.
14. Ross R. K., Paganini-Hill A., Wan P. et al.: Effect of hormone replacement therapy on breast cancer risk: estrogen versus estrogen plus progestin. *Journal of the National Cancer Institute*, 92, 328, 2000.
15. Schairer C., Lubin J., Troisi R. et al.: Menopausal estrogen and estrogen progestin replacement therapy and breast cancer risk. *Journal of the American Medical Association*, 283, 485, 2000.
16. Sellers T. A., Mink P. J., Cerhan J. P.: The role of hormone replacement therapy in the risk for breast cancer and total mortality in women with a family history of breast cancer. *Annals of Internal Medicine*, 127(11), 973, 1997.
17. Surkont G., Wlazlak E., Tuzin J.: Kontrowersje wokół hormonalnego leczenia zastępczego (HLZ) – praktyczne aspekty ostatnio opublikowanych wyników, badania WHI. *Ginekologia Praktyczna*, 11(2), 2, 2003.
18. The Women’s Health Initiative Group: Risk and benefits of estrogen plus progestin in healthy postmenopausal Women. Principal Results from the WHI Randomized Controlled Trial. *Journal of the American Medical Association*, 288, 321, 2002.
19. Weiss L. K., Burkman R. T., Cushing-Haugen K. L. et al.: Hormone replacement therapy regimen and breast cancer risk. *Obstet. Gynecol.*, 100, 1148, 2002.
20. Zgliczyński S., Wiktorowicz-Dudek A.: Określenie populacji kobiet stosujących hormonalne leczenie zastępcze (HLZ). *Endokrynologia Polska*, 51, 271, 2000.
21. Żołnierczuk-Kieliszek D., Pacian A.: Postawy kobiet w wieku okołomenopauzalnym wobec hormonalnej terapii zastępczej. *Problemy Higieny*, 83, 99, 2003.

## SUMMARY

The aim of the study was to establish a correlation between the incidence of breast cancer and the use of hormonal replacement therapy. The survey included 566 women, with a distinction between healthy women and women with breast cancer (354 and 212, respectively). The healthy women were chosen by means of the sampling method, while the women with cancer were patients after mastectomy staying at four Lublin hospitals. The method of diagnostic survey was applied, with the use of a questionnaire. The collected material underwent the statistical analysis in the form of the  $\chi^2$  test. The results of the survey show that the use of hormonal replacement therapy for the period exceeding 5 years in the studied groups was statistically more frequent in the case of women after mastectomy with an elevated risk of breast cancer in the family. The percentage of women using this method of alleviating menopause symptoms increases together with age.

## STRESZCZENIE

Celem pracy było ustalenie korelacji między zachorowaniem na raka piersi a stosowaniem w przeszłości hormonalnej terapii zastępczej. Badaniami objęto 566 kobiet z uwzględnieniem podziału na kobiety zdrowe i chore na raka piersi (354 kobiet zdrowych i 212 chorych). Osoby zdrowe wybrano z ogólnej populacji w sposób losowy, natomiast po mastektomii – były pacjentkami czterech lubelskich szpitali. Zastosowaną metodą badawczą był sondaż diagnostyczny, z wykorzystaniem techniki ankiety. Zebrany materiał poddano analizie statystycznej przy zastosowaniu testu  $\chi^2$ . Wyniki badań pokazują, iż stosowanie hormonalnej terapii zastępczej powyżej pięciu lat w badanych grupach dotyczyło statystycznie częściej kobiet po mastektomii, dodatkowo obciążonych ryzykiem rodzinnego występowania nowotworów piersi. Wraz z wiekiem wzrasta odsetek kobiet stosujących ten sposób łagodzenia objawów menopauzy.