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Assessment of women's knowledge about cytology as a prophylactic method in cervical cancer

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Abstract

Introduction

Cervical cancer (CC) is currently the eight most common cancer among women and the seventh leading cause of cancer-related death in women in Poland. Early, non-invasive cervical cancer may develop over the years without clinical symptoms. Also, given the fact that early forms are treatable effectively, it's important to get preventive examinations. It is especially important in the group of women at high risk of developing CC.

Purpose

The aim of the study was to analyse the opinions of 1,260 women on the cytology as a prophylactic method in cervical cancer.

Material and methods

Women's knowledge was verified with an anonymous online questionnaire. The obtained results were analysed and checked on the basis of scientific literature.

Results

The vast majority of respondents (89,6%) consider Pap smear test as a screening test for CC. According to 40.4% of women, the first test should take place after sexual initiation. 17.7% believed that the examination should be done after the first menstruation. 55% of the respondents answered that Pap smear test should be performed every year. 38.4% believed that the test should be performed every 3 year. 20.3% of respondents do not know when to take the first Pap smear test and 30.1% of the respondents had never performed a pap smear.

Conclusions

Most women know the importance of regular cytology, but unfortunately not all women relate this knowledge to themselves. Early, regular and continuous education of women on the prevention of cervical cancer is extremely important

Key words: Cytology; Pap smear test; cervical cancer;

Introduction

Cervical cancer (CC) is one of the most prevalent malignancies of female reproductive tract. In 2018, 570,000 new cases and 311,000 deaths were estimated worldwide [1]. In Poland in 2017 CC accounted for 3.0% of all newly registered tumour cases among women, and was the eighth most common female malignancy. At the same time, CC is the ninth leading cause of cancer-related death among Polish women. However, it is ranked third in incidence and

second in mortality among females between 15 and 44 years of age [2]. This indicates that CC is an age-related disease, especially affecting women of reproductive age.

Cervical cancer, in its non-invasive (in situ) form, can last for many years without clinical symptoms. Also, given the fact that early forms are treatable effectively, it's important to get preventive examinations. Regular gynaecological examination and cytology collection is essential. Currently there are two types of diagnostic tests for cervical cancer screening: Papanikolaou test (Pap smear test, cytology) and HPV test [3].

There is a cervical cancer screening program in Poland. it includes women aged 25-59 who have not had Pap smear screening in the last 3 years. The aim of the program is to reduce the female mortality rate from cervical cancer to the level achieved in the European Union countries and increasing the knowledge of women about the prevention of cervical cancer and the introduction of a uniform model of diagnostic procedures throughout the country [4,5]. Prophylaxis is especially important in the group of women at high risk of developing CC

Persistent human papillomavirus (HPV) infection is the most important factor development of the CC [6]. It can be spread through sexual contact. For this reason, risk factors include the onset of sexual activity early, a large number of multiple partners, and infrequent use of condoms [2,3]. Other risk factors that increase the likelihood of developing the disease are: smoking, multiple natural births, use of oral contraceptives by women who smoke simultaneously, a positive history of sexually transmitted diseases, certain autoimmune diseases and chronic immunosuppression. [7].

Purpose

The aim of the study was to analyse the opinions of 1,260 women on the cytology as a prophylactic method in cervical cancer.

Material and methods

The research was conducted on the group of 1,260 survey respondents, who filled out the Internet questionnaire. The study was conducted from 7th July 2019 to 17th September 2020. Participation in the experiment was voluntary. The results were analysed and checked on the basis of scientific literature. The results were statistically processed using for this program Microsoft Office Excel.

Results

1260 people answered the survey questions. Most of them (84.6%) were between 18 and 35 years old. The largest groups of people lived in the city over 100.000 residents (37.6%) and in the countryside (36.5%). 57.2% of the respondents graduated from a university. The vast majority were sexually active (76.5%) and usually had 1 to 3 sexual partners (62.4%) [Table 1].

Variable		N	(%)
Age (years)	< 18	10	0.8%
	18-25	782	62.1%
	26-35	283	22.5%
	36-45	83	6.6%
	46-65	74	5.9%
	> 65	28	2.2%
Place of residence	The city over 100.000 residents	474	37.6%
	The city 20-100.000 residents	222	17.6%
	The city below 20,000 residents	103	8.2%
	Village	460	36.5%
Education	Higher	720	57.2%
	Secondary	480	38.1%
	Vocational	27	2.1%
	Primary	32	2.5%
Sexual active	Yes	962	76.5%
	No	295	23.5%
Number of sexual partners	None	202	16%
	1-3	785	62.4%
	4-10	202	16%
	>10	70	5.6%

Table 1. Characteristics of the study group.

The women were asked what screening test can detect cervical cancer? [Figure 1].

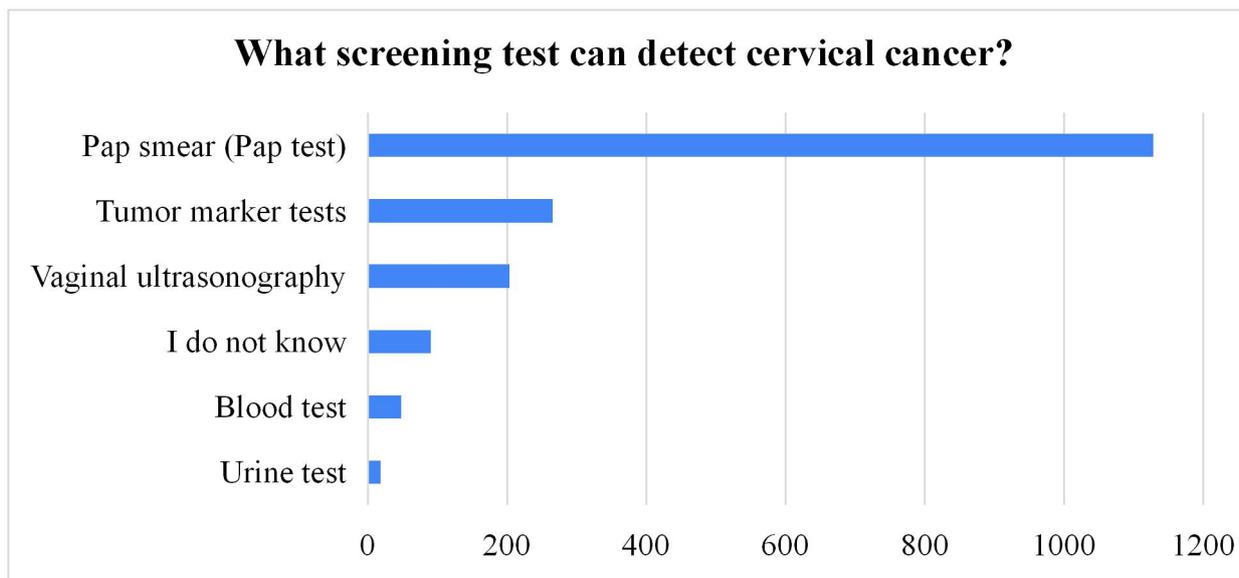


Figure 1. Screening tests in cervical cancer.

The vast majority of respondents (89,6% n=1128) consider Pap smear test as a screening test for CC. 21% (n=265) of women consider tumor marker tests to be a screening method. Vaginal ultrasonography was chosen by 16,1% (n=203) of the respondents. 3,8% (n=48) selected blood test and 1,4% selected urine test (n=18) as a tests which can detect cervical cancer. Only 7,2% (n=91) did not now what screening test can help to detect cervical cancer.

Women were also asked when the first Pap test should be performed? [Figure 2.]

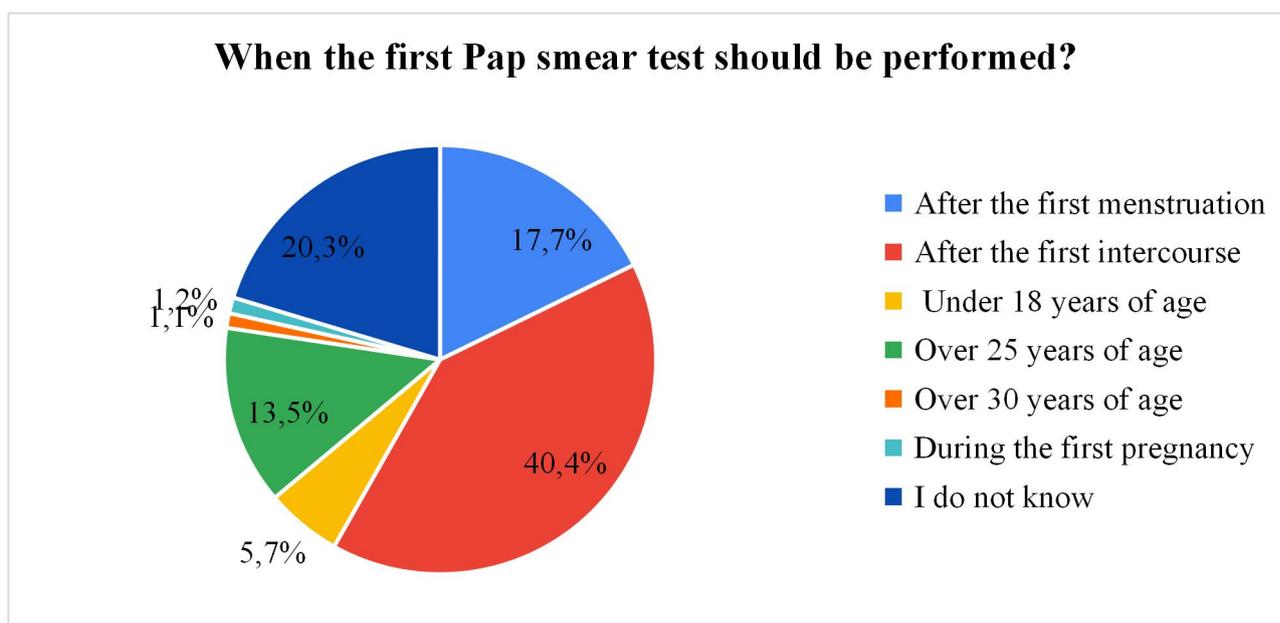


Figure 2. Knowledge about the first Pap smear test.

According to 40.4% (n = 508) of women, the first test should take place after sexual initiation. 17.7% (n = 255) believed that the examination should be done after the first menstruation.

Among the respondents, 13.5% (n = 170) believe that the first test should be performed after the age of 25, and only 1.1% (n = 14) that after the age of 30. 5.7% (n = 72) of subjects chose the age below 18 as appropriate for the first Pap smear test. 1.2% (n = 15) thought the first test should be performed during the first pregnancy. Surprisingly, 20.3% (n = 255) of respondents do not know when to take the first Pap smear test.

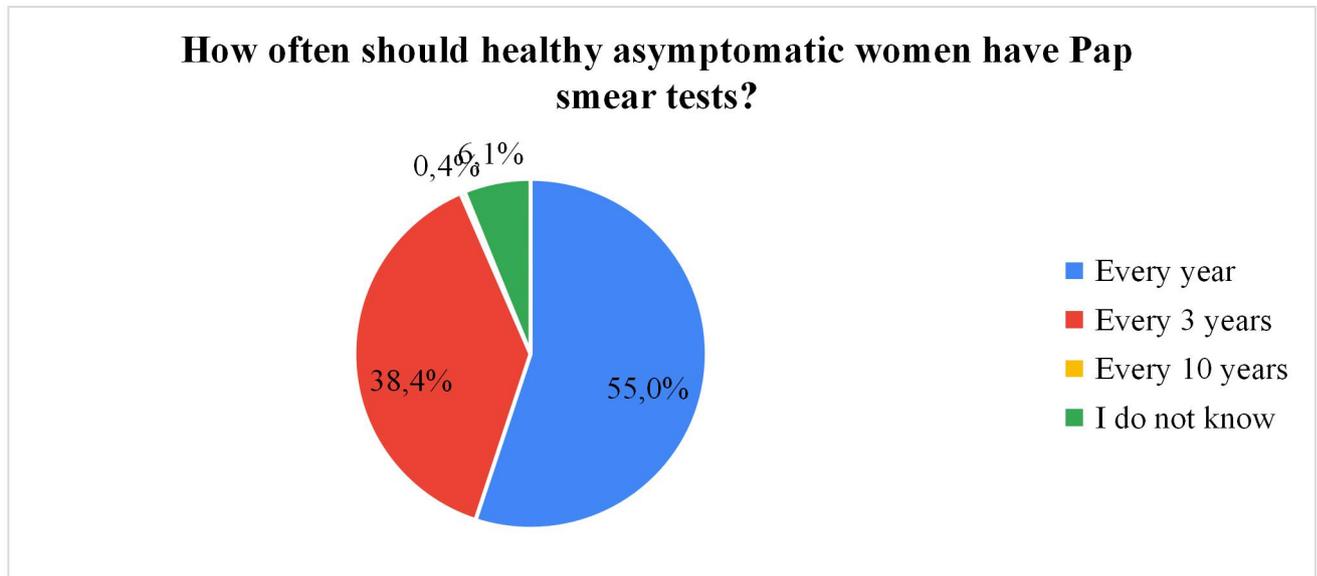


Figure 3. How often the test should be performed.

When asked How often should healthy asymptomatic women have Pap smear tests? [Figure 3.] 55% (n = 693) of the respondents answered that every year. 38.4% (n = 484) believed that the test should be performed every 3 years. Only 0.4% (n = 5) of the respondents answered that every 10 years. 6.1% (n = 77) of the respondents did not know when to undergo a Pap smear test. The next question asked whether the respondents had ever had a Pap smear test and when? [Figure4.]

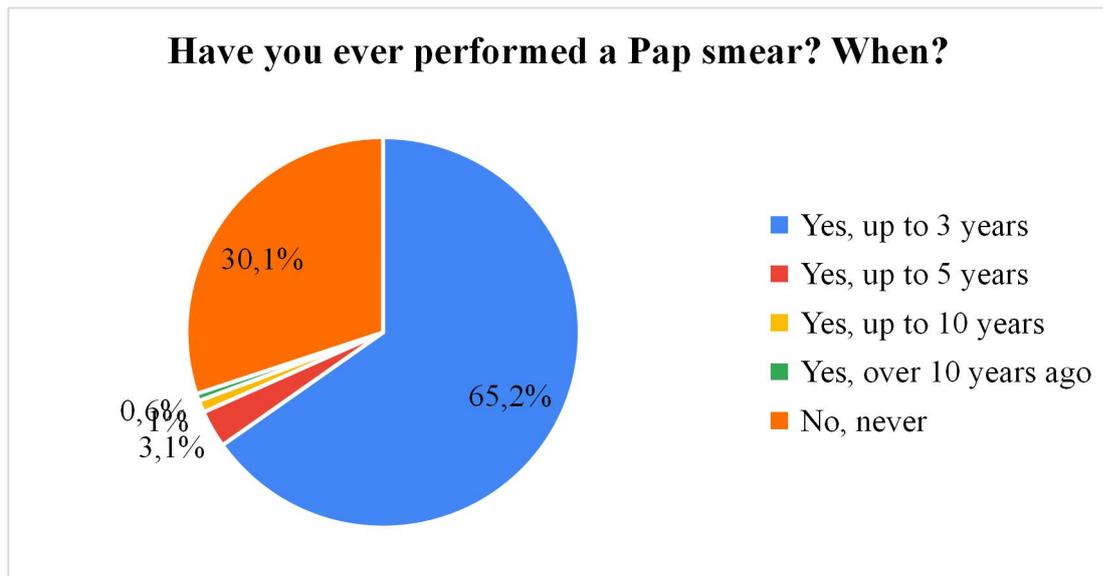


Figure 4.

Among the respondents, 65.2% (n = 822) performed the Pap smear test within 3 years. 3.1% (n = 39) performed it in 5 years, and 1% (n = 13) in the last 10 years. 0.6% (n = 7) reported that they performed it over 10 years ago. As many as 30.1% (n = 379) of the respondents had never performed a pap smear test.

Discussion

The analysis of the answers given by the respondents in the questionnaire made it possible to assess the level of knowledge about cytology as a prophylactic method cervical cancer.

Cervical cancer is a tumor with a relatively slow expansion, which results from the multi-stage process of its formation, and this theoretically gives a chance to detect pre-neoplastic and early neoplastic changes. The location of this tumor is very good from the point of view of easy access to diagnostic methods [8].

The downward trend in morbidity and low mortality in developed countries are associated with the implementation of universal and continuous prevention and better access to the health care system [9]. In Poland, the incidence and mortality of cervical cancer has changed only slightly since 1980, although there has been a decline in the number of cases and deaths, the observation of the dynamics of this decline does not contribute to excessive optimism [9].

The prevention of cervical cancer mainly consists in reducing the incidence of new diseases and limiting the role of factors that increase susceptibility to the disease, i.e. primary prevention. Cytology test is painless, time consuming, inexpensive and readily available [7].

However, it is a test that must be performed regularly to be effective. The most difficult part is getting women to be highly enrolled in this study.

The National Program for the Prevention and Early Detection of Cervical Cancer, financed by the National Health Fund (in line with the Recommendations of the Polish Gynaecological Society of 2006), allows women aged 25 to 59 to perform free smear tests every three years. World statistics show that such frequency of testing would be enough to significantly reduce the incidence of invasive cervical cancer [5,8].

In our study the respondents most often knew that the test that allows for early detection of changes on the cervix is cytology (89.6%). This is encouraging, as proper screening can prevent disease development. The conducted research showed that the majority of the respondents knew that by performing the test regularly, it is possible to avoid cervical cancer - 55% believe that such a test should be performed every year, and 38.4% every 3 years.

The Polish Gynaecological Society recommends that the first Pap smear should be performed no later than 3 years after the start of sexual intercourse [guidelines]. 40.4% of the respondents knew that the first test should be performed after starting sexual intercourse. Unfortunately, as many as 20.3% of respondents did not know when to perform the test. 65.2% of the respondents had a Pap smear test within the last 3 years. However, it is disturbing that as many as 30.1% of women have never had this test done.

In similar study, Stefanek et. al conducted a survey on 777 respondents [9]. An original questionnaire was used for the study, which concerned the knowledge of the Pap smear, risk factors and prevention of cervical cancer. The vast majority of women, 607 (78.12%) of the respondents, are aged 18–28 years. 53 responses were recorded over 40 years of age, which constitutes 6.82% of the entire group. In this study 61.9% women selected that Pap smear should be performed once a year and 35.8% that the minimum should be every 3 years if the previous result was good. According to the 47.6% respondents, the first test should be performed until the age of 25 if the sexual intercourse has not started and 38% of them selected “before the planned start of sexual intercourse”. 21.9% chose “after the first menstruation”. Among the respondents aged 18-29, 30.6% had never had a Pap smear test, and 40.8% had done it in the last year. 60% of the surveyed women up to the age of 29 and over 90% over the age of 29 had a Pap smear test within the last 3 years [9].

In the study by Paśławska et al. conducted in January 2013 [10], 76% of women were aware that they should have a Pap smear test, 65% of women having done it at least once in their life,

of which slightly more than half did it in the last year. A relatively large percentage of women (90.2%) knew the importance of pap smear for the early diagnosis of cervical cancer [10].

In another study by Jankowska et al., 135 women were examined from November 2016 to January 2017. 74% indicated that the Pap smear test allowed to detect changes in the cervix. 39% of women have never been tested for the early detection of cervical cancer, and 12% do not remember when such a test was performed. Almost half of the respondents (42%) reported that they had had a Pap smear in the last 3 years, and about 7% of women - in the last 3-5 years [11].

A study by Pacewicz et al. conducted in 2011 among 100 women [12], showed that the most famous. the program for the prevention of cervical cancer was cytology (80% of women). When asked about the date of the last Pap smear, the patients most often (35%) chose the answer "a year ago". 44% of women stated that Pap smear should be performed once a year, 39% of women indicated that it should be done once every 2 years. 15% of the respondents knew how often to have a Pap smear test. [12]

In 2013, a study of the knowledge of female students about the risk factors for cervical cancer was conducted by Ulman-Włodarz et al. In their study 73% of the respondents believed that women should conduct a cytology smear every year. Performing tests every two years was suggested by 10% of women, and every three years - by 1%. 21% of the respondents stated that they had never had a Pap smear test. At the same time, 95% of the respondents considered the pap smear as very important. [13].

In the light of this research and the cited studies, it is clear that women are aware of the existence of a pap smear test. However, not everyone knows that this examination is a prophylaxis in cervical cancer. More and more women are aware of the need to undergo cytology, but not all of them feel the need to do so. Worryingly, many women do not know when to do the test, and many have not had it in their lifetime. Adequate education on the course of the examination and the possibility of carrying it out free of charge under the National Health Fund could significantly influence the willingness of women to be tested. Especially young women should be educated so that they regularly check themselves and make informed decisions about their health and life. It is important to realize that women are aware of the fact that a Pap smear can detect cervical cancer at an early stage of development, giving them a chance to cure completely and thus save their lives [14].

Conclusions

Most women know the importance of regular Pap smear tests, but unfortunately not all women relate this knowledge to themselves. Early, regular and continuous education of women on the prevention of cervical cancer is extremely important. The Cervical Cancer Prevention and Early Detection Program, despite all advertising, is not satisfactorily known among young people. The education and motivational attitude of doctors towards patients is important, not only specialists, but also primary care physicians as well as nurses and midwives. These specialists should be included in more active actions for the prevention of cervical cancer.

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