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THE PARTICIPANTS EVALUATION OF SCREENING COLONOSCOPY

KOLONOSKOPIA PRZESIEWOWA W OCENIE JEJ UCZESTNIKÓW

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S u m m a r y

I n t r o d u c t i o n . The awareness of the need to carry out screening programs for the early colorectal cancer detection increases in the Polish society. Colonoscopy is a common tool used in these programs.

T h e a i m of this paper is to present the participants' evaluation of the screening program for the early colorectal cancer detection with the use of screening colonoscopy.

M a t e r i a l a n d m e t h o d s . 1442 participants aged 40-65 were examined. A day before colonoscopy the patient took a cleansing agent based on polyethylene glycol (Fortrans). Most examinations were performed under an anaesthetic with the use of midazolam, which was administered orally a quarter before the examination. The degree of the large intestine cleansing was assessed using the 4-degree scale (very good, good, sufficient and poor cleansing). A very important issue in every screening examination is the acceptance of the basic examination tool by the participants. Based on this fact, the authors of the program proposed that directly after the examination the patients filled in a questionnaire where they assessed the usefulness of the examination, the burdensomeness of the preparation process, their tolerance of screening colonoscopy, a general feeling regarding the examination and declared if they would took part in that examination once again and if they would recommend it to other people.

R e s u l t s . The majority of participants think the examination is useful, well-tolerated, while the preparation process is not burdensome, performed in a very positive atmosphere and they would agree to the examination once again.

S t r e s z c z e n i e

W s t ę p . W społeczeństwie polskim wzrasta świadomość potrzeby prowadzenia programu badań przesiewowych dla wczesnego wykrywania nowotworów złośliwych jelita grubego. Powszechnie stosowanym narzędziem tych programów jest kolonoskopia.

C e l e m p r a c y była ocena programu badań przesiewowych dla wczesnego wykrywania nowotworów jelita grubego przy użyciu kolonoskopii przesiewowej przez jej uczestników.

M a t e r i a ł i m e t o d y . Badania wykonano u 1442 uczestników w wieku od 40 do 65 lat. Dzień przed kolonoskopią badany przyjmował środek oczyszczający jelito grube oparty na glikolu polietylenowym (Fortrans). Większość badań wykonywana była w znieczuleniu z zastosowaniem midazolamu, który podawano doustnie kwadrans przed badaniem. Stopień oczyszczenia jelita określono w czterostopniowej skali jako dobre, wystarczające, słabe i nieoczyszczone. Bardzo ważnym zagadnieniem w każdym programie przesiewowym jest akceptacja przez uczestników podstawowego narzędzia badawczego. Między innymi z tego powodu autorzy programu zaproponowali, aby bezpośrednio po badaniu uczestnicy wypełniali ankietę, w której oceniali przydatność badania, uciążliwość przygotowania, tolerancję kolonoskopii

przesiewowej, ogólne wrażenie związane z badaniem oraz składali deklarację czy poddali by się temu badaniu ponownie i czy polecili by to badanie innym.

W y n i k i . Uczestnicy w swej znakomitej większości uważają, że badanie to jest użyteczne, dobrze tolerowane, przygotowanie do niego nie jest uciążliwe, badaniu towarzyszy bardzo dobra atmosfera i wyraziliby zgodę na badanie powtórne oraz polecaliby to badanie innym osobom.

Key words: screening colonoscopy, burdensomeness of preparation for colonoscopy, screening colonoscopy quality, bowel preparation, colonoscopy tolerance

Słowa kluczowe: kolonoskopia przesiewowa, uciążliwość przygotowania do kolonoskopii, jakość kolonoskopii przesiewowej, oczyszczenie jelita grubego, tolerancja kolonoskopii

INTRODUCTION

In economically developed countries malignant tumours constitute the second reason of death right after atherosclerosis causing over 26% of men's deaths and 23% of women's deaths. According to the National Cancer Registration, in 2006 in Poland there were 12929 new cases of colorectal cancer and 8784 deaths caused by that malignant tumour [1]. A constant increase in colorectal cancer incidence by 2.5% each year has been observed in Poland. In the USA since the late 70's there has been observed a decrease in the incidence rate of that malignant tumour and since the late 90's the death rate has been also decreasing. Screening examinations, which allow detecting early, nearly completely curable colorectal cancers, are thought to have contributed to this state [2]. A bad epidemiological situation in Poland and an extremely unsatisfactory treatment results comparing to other developed countries were the basic arguments for introducing the screening program for the early colorectal cancer detection (SP) in asymptomatic population in 2000 by the Ministry of Health [3]. At the same time, the decision to recommend optical colonoscopy as a tool used in screening examination for the early colorectal cancer detection in Poland was made. Screening colonoscopy has a lot of advantages, the most important of which is its one-step characteristics, which means that it is simultaneously a screening and diagnostic examination, and a treatment tool, in case of being performed during polypectomy [4]. Yet, according to patients and even medical care professionals in Poland, it had the opinion of being an unpleasant and painful examination. Screening colonoscopy has also a basic disadvantage, which is its invasive character with the possibility of a large intestine perforation in a fraction of patients. In addition, technical limitations of colonoscopy, unsatisfactory bowel preparation, incomplete colonoscopy, improper mucous membrane visualisation, presence of adenomas in the proximal part of the large intestine, especially of compact characteristics, and other slightly raised or flat cancerous abnormalities, and also in some cases colonoscopy being performed by an inexperienced doctor carry the risk of abnormalities in the large intestine, including cancer of that organ, being overlooked [5, 6]. Obtaining the full effect of screening colonoscopy in the form of evaluating the whole colon and removing completely all polyps up to 1 cm in size, qualifying for further treatment because of the abnormalities detected, and also fixing the date of the next colonoscopy requires achieving a high quality of colonoscopy. So far, universal standards of screening colonoscopy quality control have not been drawn up; however, a few parameters have been determined. Recognised parameters for colonoscopy are caecal intubation, the frequency of adenoma detection and the time it takes to withdraw the apparatus from the large intestine [7, 8]. The acceptance of the basic examination tool by participants is an important issue in every screening program. Basing on this fact, the authors of the program proposed that directly after the examination the patients filled in a questionnaire where they assessed the usefulness of the examination, the burdensomeness of the preparation process, their tolerance of screening colonoscopy, a general feeling regarding the examination and declared if they would took part in that examination once again and if they would recommend it to other people [3]. The aim of the paper is to present the participants' evaluation of the screening program for the early colorectal cancer detection with the use of screening colonoscopy.

MATERIAL AND METHODS

The study was performed in the Chair and Clinicof Gastroenterology, Vascular Diseases and Internal Diseases of Nicolaus Copernicus University Collegium Medicum in Bydgoszcz. The department based in Jan Biziel University Hospital no. 2 in Bydgoszcz is a centre where colonoscopies within the National

Screening Program for the Early Detection of the Colorectal Cancer have been performed every year since 2000. Patients aged 50-65 or 40-65 with the history of abdominal malignant tumour in first degree relatives were invited to the examination. The criteria of exclusion in the screening examination were as follows: the presence of clinical symptoms suggesting the colorectal cancer, the presence of other serious conditions, previously recognised inflammatory bowel diseases and familial adenomatous polyposis or hereditary cancer unrelated to poliposis. A day before colonoscopy the participant took a cleansing agent based on polyethylene glycol (Fortrans) according to the recommendations given by the producer. Most examinations were performed under an anaesthetic with the use of midazolam administered orally. The doctor performing colonoscopy included in the description of the examination the information concerning: achieving or not achieving caecal intubation and the detection of polyps and all other abnormalities. The degree of the bowel preparation was assessed using the 4-degree scale as very good, good, sufficient and poor. During the screening colonoscopy, polyps of the size up to 1 cm were removed. The histopathological evaluation concerned the polyps removed during colonoscopy basing on the criteria set by the World Health Organisation [9] and biopsy samples of any other changes. After screening colonoscopy the patient was given the description of the examination and the information about the date of the next examination, the date of the histopathological examination results or the need to be admitted to the hospital or a specialist clinic for further treatment. After that, the participant was asked to fill in a questionnaire. The questionnaire consisted of five multiple choice questions concerning the screening program: the usefulness of the examination – very useful, rather useful, no opinion, not useful; burdensomeness of the preparation – not bothersome, slightly bothersome, bothersome and very bothersome; examination tolerance – very good, good, satisfactory, bad; overall impression concerning the atmosphere during the examination – very good, good, satisfactory, bad; repeating the examination if needed – yes, no, yes but... (in general anaesthesia); recommendation of the examination to family and friends – yes, no, yes but... (in general anaesthesia).

RESULTS

1442 people participated in the study. Among the participants there were 883 (61.2%) women and 559 (38.8%) men. The average age of the participants equalled 56.1 while the average age of women equalled 55.9 and of men – 56.6. The most numerous group was composed of Bydgoszcz inhabitants – 73%, other cities – 14.5% and rural areas – 12.5% of the total number of patients. Cancer located in the abdomen was found in the first degree relatives in 485 cases (33.6% of all participants), including 326 cases (22.6% of all participants) of colorectal cancer. The large intestine was well cleansed in 774 cases (53.7%), sufficiently in 462 cases (32%), poorly in 204 cases (14.1%) and not cleansed in 2 cases (0.2%). The caecum was achieved in 1330 subjects (92.2%). During colonoscopy a polyp/polyps were detected in 366 patients (25.4%), including 185 women (21% of all the women taking part in the examination) and 181 men (32.4% of all the men taking part in the examination). Abnormalities such as haemorrhoids (445 cases), diverticula (203 cases), endoscopic melanosis features (44 cases) were found. Basing on histopathological examination, adenomas were detected in the large intestine in 250 (17.3%) participants, including 125 women (14.2%) and in 125 men (22.4%). 1434 people answered the questionnaire after screening colonoscopy. The detailed questionnaire results according to participants' sex are presented in figures no. 1-6.

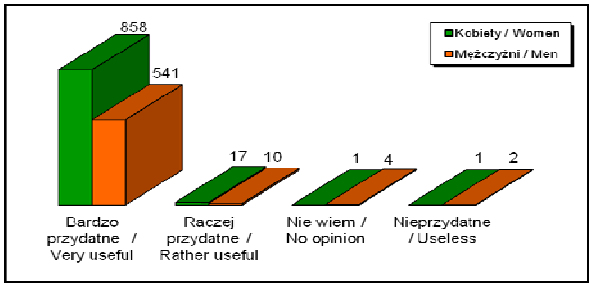

Fig. 1. *Usefulness of screening colonoscopy in patients' opinion*

Ryc. 1. *Ocena przydatności kolonoskopii przesiewowej w opinii pacjentów*

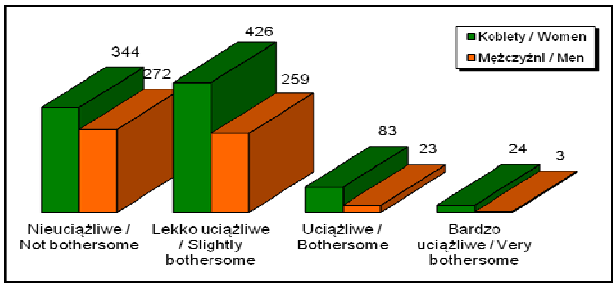

Fig. 2. *Burdensomeness of the preparation to colonoscopy in patients' opinion*

Ryc. 2. *Uciążliwość przygotowania do kolonoskopii w opinii pacjentów*

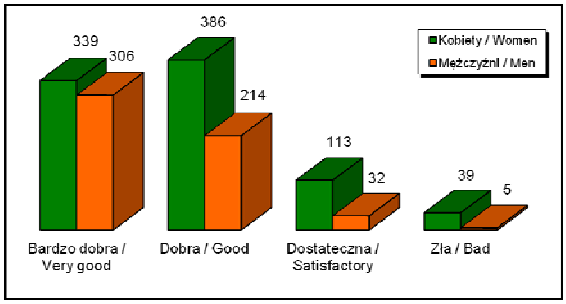

Fig. 3. *Colonoscopy tolerance*

Ryc. 3. *Tolerancja kolonoskopii*

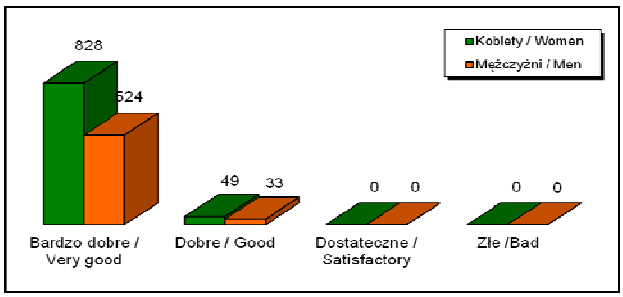

Fig. 4. *General notion about atmosfery during colonoscopy*

Ryc. 4. *Ogólne wrażenie na temat atmosfery podczas kolonoskopii*

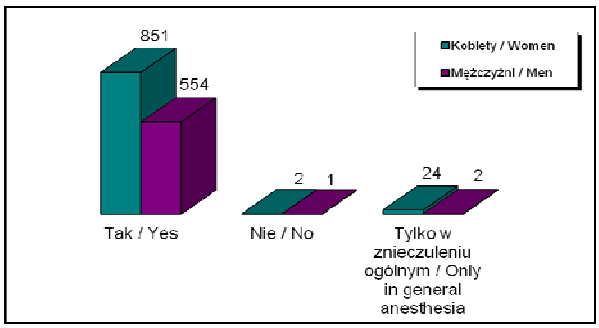

Fig. 5. Readiness for repeated colonoscopy

Ryc. 5. Gotowość do powtórnej kolonoskopii

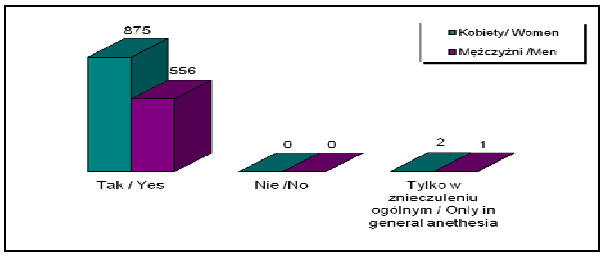

Fig. 6. *Answer to the question "Do you recommend colonoscopy to your friends?"*

Ryc. 6. *Odpowiedź na pytanie "Czy polecasz badanie twoim znajomym?"*

DISCUSSION

The region of Kujawsko-Pomorskie is inhibited by slightly more than 5% of inhabitants of Poland. In 2001 there were 612 persons who suffer from the large intestine cancer. The incidence rate was increasing and in 2008 it amounted to 845 cases. The average increase in the colorectal cancer incidence in Kujawsko-Pomorskie is higher than the average in Poland and equals 29 new cases, i.e. 4.8% when comparing each year to a previous one [10, 11]. Between 1992 and 2001 in one of surgical units in Poland there were 359 patients treated for colorectal cancer aged 26-88 with the average age of 67. The stage of disease clinical development according to Dukes' classification was as follows: A (2.8%), B (23.9%), C (25.5%) and D (47.4%). The results of this research and a number of other ones indicate that the time at which Polish patients report for a surgical operation is too late and does not allow achieving satisfactory treatment results [12]. The rate of 5-year-long survivals in Poland is one of the worst in Europe and equals 25%, whereas in the USA and Western Europe it often equals 60% [13]. Consequently, screening colonoscopy performed in the region of Kujawsko-Pomorskie within the National Screening Program is an important factor of decreasing the large intestine cancer incidence and death rates in the future [14]. In 2009 for the first time since 2000 the number of new incidences decreased by 63 cases, i.e. 7.5%. If such a tendency continues, it may be assumed that the decrease in the colorectal cancer incidence results from the realisation of the National Screening Program by two centres in Bydgoszcz [15]. The participants of the National Screening Program visited our centre to undergo colonoscopy mainly because of the information presented in local media, encouraged by other program participants, referred by specialists and, which is very alarming, the most rarely by family doctors. Similar observations have been made by the

National Screening Program followers in other centres in Poland [16]. Although colonoscopy is an invasive examination and in the common opinion of patients is not well accepted, in our centre the money from the national budget is allocated for the realisation of the National Screening Program every year [14]. The participants of the National Screening Program were more frequently women, large city inhabitants and relatives of persons with the history of abdominal malignant tumours [14, 16]. The results of the questionnaire filled in by the participants after the examination is a valuable material for the analysis of the improvement of screening colonoscopy quality [3, 14, 16]. The agreement to have the examination repeated provided that it would be done 'in general anaesthesia' expressed by those participants who badly tolerated the examination and in whom caecum was not achieved is worth considering as well. A similar answer was obtained to the question if the participants would recommend that examination to other people. Colonoscopy is performed under anaesthesia in the countries where this tool has been used for several dozen years in screening examinations for decreasing colorectal cancer death rate [17]. In our centre screening colonoscopy is performed under anaesthesia in 86% cases, mainly with the use of midazolam and only in few cases with the use of intravenously administered medicine.

CONCLUSIONS

The awareness of the need to carry out a screening program for the early detection of large intestine malignant tumours in Polish society is increasing. Women, large city inhabitants and patients with medical history are reporting for colonoscopy more often. The Polish are becoming a well-informed society and therefore, they may be more effectively reached by publishing the information about preventing screening on the Internet and media rather than through medical care professionals. In spite of the common opinion that colonoscopy is an unpleasant and painful examination, the results of the questionnaire carried out after screening colonoscopy contradict that thesis. A substantial majority of participants think that the examination is useful, well-tolerated, the preparation is not bothersome, performed in a good atmosphere and that they would agree to have the examination repeated and would recommend it to other people.

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