Mammography Screening – How Persistent Should We Be in the Recommendations?

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A B S T R A C T

55 year old women came to me as her family doctor, seeking advice on mammography screening. She rather wouldn't do it because she feels well, is a bit afraid of radiation and thinks it's not important, since she doesn't have individual risk. Having in mind newly emerging evidence about the questionable value of the screening, especially in women without any risks, I was in dilemma what to recommend. Therefore, we did a limited literature search. Systematic reviews are questioning effectiveness of mammography as screening method, evidences show limited effect on reducing mortality and the burden of overdiagnosis and overtreatmnent. Professional recommendations vary from country to country. Overall impression is that many questions remain open and, until better method of screening is found, the decisions about breast cancer screening should be strongly individualized, according to the patients risks. We openly discussed it, she decided to postpone mammography for a while.

***Key words**: mammography, screening, evidence-based, recommendations*

Introduction

The incidence and mortality of breast cancer in Croatia is continuously increasing, although in recent years there has been stabilization in mortality trend[1]. The individual consultations and education on risk factors, as well as education on self-examination and breast examination, are the preventive measures to be undertaken by family doctors (FD) and gynecologist as it was defined by the Plan and Programs of Health Care Measures, Croatian standards for health care delivery[2]. Additionally, from 2006 the Ministry of Health and Social Welfare is conducting the National screening program for early detection of breast cancer, »Mamma«, which includes mammography every two year for women aged 50–69 years[3]. By post to home address, women from the target group receive the invitation letter with the date, time and place where they should do the mammogram. There is also a phone number they should call if they have already performed mammography for any reason, within two years.

Case Report

55 year old women received a letter for screening mammography by post and presented it to me as her chosen FD, with concerns about the procedure. Although she has never had a mammography, she rather wouldn't do it because she feels well, is a bit afraid of radiation and doesn't perceive it as important in general, since there is no family history of breast or ovarian cancer. She delivered babies twice, breast-feeds, never smoked, is not obese, and hasn't taken any pills including contraceptive and menstrual bleeding stopped five years ago.

At that moment, I was rather confused having in mind newly emerging evidence about the questionable value of mammography, especially in women without any risks. I know her very well; she is my patient more than ten years, a responsible one, usually taking care about herself and her family, never in panic. Therefore, we openly discussed the good intention of Mamma program on one side, and new evidence, on another side. At the end she decided to postpone mammography for a while.

Discussion and Conclusions

Current recommendations on mammography screening vary from country to country. The increased number of countries with a long tradition is actually questioning the effectiveness of the program. In the UK, screening is

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carried out since 1985, it is considered annually preventing 1,300 deaths, and National Health Service (NHS) decided that screening is beneficial and should be continued[4]. Swiss Medical Board recommended in February 2014 to reject the screening program for breast cancer because it leads to too much unnecessary interventions. From their calculations, systematic mammography saves 1–2 women per 1000 mammograms done, but leads to unnecessary tests and procedures for the 100 women per 1000 screened once[5]. A similar situation is with two main agencies dealing with preventive services. US Preventive Task Force specially noticed at their web-pages that the recommendations for mammography screening to all women aged 50–74 are currently under revision[6]. In The Canadian Task Force recommendations from the years 2011, mammography screening to all women from 50–74 years was included[7]. But, they also pointed out that a quality of evidence was week.

There are two serious reasons to question the use of mammography screening to all women aged 50–69. The first is effectiveness of mammography as screening method and second is the possibilities of overdiagnosis and overtreatmnent. Although it was believed that mammography would save a large number of women's lives, recently published studies do not support this notion[7,8]. In Canada, in 15 screening centers, around 90 000 women from 40 to 59 years were followed up through five years. The results indicated there was no reduced mortality in those screened with mammography compared to the control group followed by usual care[7,8]. However, a number of full or partial mastectomies were significantly higher in the mammography group. Observational studies suggest an even greater occurrence of over-diagnosis in women who have undergone screening [9]. A Swedish study of mortality indicates that mammography screening program introduced in 1974, with the highest response rate from 75 to 85%, has limited or no effect on reducing mortality[10]. The same conclusion was made in Denmark in a study of regions where screening was implemented, compared to those without the programs[11]. The similar situation was observed in Norway[12]. It is well documented that the incidence of breast cancer is reducing in the Western countries, so the International Prevention Research Institute (IPRI) sought confirmation that it is the impact of the mammography screening programs. But the study that included countries in which the program is implemented at least 7 years, with minimum response rate of 60%, did not show the expected decrease in the incidence of invasive breast cancer[13].

Retrospective analysis of WHO statistics data on mortality trends in 30 European countries also showed that breast cancer mortality has continued to fall in Western countries from 1990. It was considered to be a primarily result of a newer and effective treatment options and efficacy of the health care system in those countries. The results have shown that in Central European countries additional efforts have to be made, because there is continuously increasing mortality. It is considered mainly due to poor efficiency of health care services, including a small number of diagnostic equipment available and lower availability of newer drugs[14,15]. The experiences of some European countries, particularly France, indicate that it is more important to invest in new methods of treatment than in new screening methods[16–18].

Therefore, until better method of screening is found, the decisions about breast cancer screening should be strongly individualized, firstly oriented to the patients under the risks. Additionally, many questions remain unanswered and further research has to be done, especially those important for everyday practice[19].

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MAMOGRAFIJA KOD ŽENA KOJE NISU RIZIČNE ZA RAZVOJ KARCINOMA DOJKE

S A Ž E T A K

55-godišnja žena obratila mi se kao obiteljskoj liječnici, tražeći savjet o probiru mamografijom. Nije sklona pretrazi jer se dobro osjeća, malo se boji zračenja, i ne smatra ju bitnom s obzirom da nema individualni rizik. Imajući u vidu nove dokaze o upitnoj vrijednosti probira mamografijom, posebice u žena bez rizika, bila sam u nedoumici što preporučiti. Zato smo dodatno provjerili pretraživanjem literature. Sustavni pregledi istraživanja dovode u pitanje učinkovitost mamografije kao metode probira, s obzirom na dokaze o ograničenom učinku na smanjenje smrtnosti i teret prekomjernog dijagnosticiranja te zahvata. Trenutne profesionalne preporuke o probiru mamografijom variraju od zemlje do zemlje. Ukupni dojam je da mnoga pitanja ostaju neodgovorena, potrebna su daljnja istraživanja, te, dok se ne pronađe bolja metoda probira, odluka o probiru treba biti individualizirana, orijentirana prema individualnom riziku pacijentice. Otvoreno smo o tome porazgovarale, pacijentica je odlučila zasad odgoditi mamografiju.