Breast Symptoms in Primary Care Practice

Barton MB, Elmore JG, Fletcher SW. Breast symptoms among women enrolled in a health maintenance organization: frequency, evaluation, and outcome. Ann Intern Med 1999;130:651–7.

Study Overview

Objective. To determine how often women present with breast symptoms to primary care providers, how these symptoms are evaluated, and how often symptoms lead to a diagnosis of breast cancer.

Design. Observational retrospective cohort study.

Setting and participants. A random, age-stratified sample of 2400 women aged 40 to 69 years as of July 1983 and continuously enrolled for 12 years through June 1995 in the staff-model division of Harvard Pilgrim Health Care, a large health maintenance organization in New England. At baseline, 1200 of the participants were aged 40 to 49 years, 600 were between 50 and 59 years, and 600 were between 60 and 69 years.

Main outcome measures. Information on all breast-related encounters for the 10-year period from July 1983 through June 1993 was abstracted from a computerized medical record. For all diagnostic visits (described as a visit prompted by an abnormality noticed by the patient), the type of symptom, clinicians' findings and recommendations, and all subsequent evaluations were recorded. Cases of cancer diagnosed subsequent to the symptom were identified.

Main results. A total of 372 women (16%) presented with breast symptoms in 539 separate episodes during the 10-year period, for a rate of 22.8 presentations per 1000 person-years. Most women had only 1 breast symptom episode, but 15% presented twice, and 9% had 3 or more episodes. Women younger than 50 years presented nearly twice as often as older women ($P = 0.001$). Rates did not differ by ethnic group. Women with a family history of breast cancer were more likely to present with breast symptoms than those without a family history (22% versus 14%; $P = 0.001$). The most common symptom was pain, followed by mass, skin or nipple change, lumpiness, and other symptoms.

Women with breast symptoms had lower rates of screening than other women before presenting but higher rates of screening afterward ($P < 0.001$). Symptoms were evaluated beyond the initial visit in 66% of patients, and invasive procedures were performed in 27% of patients.

Breast cancer was diagnosed in 6.2% of patients who presented with breast symptoms ($n = 23$) and in 4.5% of breast-symptom episodes; rates of cancer detection varied significantly by type of symptom but not by patient age. A patient report of a mass was associated with an almost 11% chance of breast cancer, whereas a report of pain led to a cancer diagnosis in less than 2% of episodes. The median time to diagnosis from the last breast-symptom episode was 36 days.

Conclusion

Breast symptoms are a common and clinically important occurrence in primary care practices and result in substantial breast cancer detection.

Commentary

The need for breast cancer screening and attentiveness to symptoms have received increasing attention among the public [1]. Similarly, since the 1980s, expert panels have recommended routine screening among certain segments of the population [2], at least partly to impart the importance of attention to this area. Previous reports on the rate of symptoms leading to a cancer diagnosis have come from referral centers in Europe or Canada [3,4]. Therefore, the authors' finding of a 4.3% rate of symptoms leading to a cancer diagnosis in a U.S. primary care setting is a significant contribution to the literature for physicians and managed care decision makers in the United States.

Applications for Clinical Practice

The data from this study support the vigorous evaluation of women older than 40 years who present in a primary care setting with breast symptoms. Because more than 4% of breast-symptom episodes led to a breast cancer diagnosis, it is incumbent on primary care providers to follow patients

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"Outcomes Research in Review" is edited by Chris L. Pashos, PhD, Executive Director of Pharmacoeconomics and Outcomes Research, Abt Associates Clinical Trials, Cambridge, MA, and Associate Editor, Health Policy, Journal of Clinical Outcomes Management. *Dr. Pashos selects, summarizes, and provides the commentary on the studies that appear in this section.*