Spanish As a Primary Language and Its Effect on Breast Cancer Presentation

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Abstract

Purpose: It is well documented that patients without health insurance tend to present at more advanced cancer stages than those with insurance. What has not been well documented is the effect that primary language has on cancer stage presentation. Given the significant number uninsured patients and patients not fluent in English who are treated at our institution, we sought to identify how these parameters affect cancer staging at presentation using breast cancer as a model.

Methods: We conducted a retrospective chart review over a 36-month period at an urban community hospital. Patients who received their initial surgical treatment at this facility were included. One hundred seventy patients were identified. Definitive breast cancer surgery, breast cancer stage, and type were recorded for all subjects. We analyzed patient demographics

including ethnicity, primary language spoken, and insurance status.

Results: All patients were female. Patient populations were evenly distributed among three major ethnicities: 39% were African American, 36% were white, 23% were Hispanic, and 2% were listed as "other." Seventy percent of Hispanic patients noted that English was not their primary language. Ten percent of the white population presented at stage III or greater compared with 16% of African Americans and 22% of Hispanics. Twenty-seven percent of non-English-speaking Hispanics presented with advanced-stage disease.

Conclusion: Non-English-speaking Hispanic patients presented at more advanced stages than their English-speaking counterparts. Health care reform must address the non-English-speaking Hispanic to effectively improve the health of all groups in the United States.

Introduction

Health care reform has become a frequent topic in the media recently. The US government will face many obstacles as it tries to provide higher quality health care at lower cost. A commonly discussed solution to lowering cost is increased prevention. One area where prevention plays a major role in health care costs is breast cancer screening. Current recommendations by the US preventative services task force include mammograms every 2 years for women age 50 to 74 for prevention of breast cancer.¹ Studies have indicated this may decrease the incidence of late-stage cancer, thus decreasing overall health care costs.²

It has been well established that there are significant disparities among racial/ethnic groups when it comes to breast cancer screening.³ We sought to examine how these differences in screening affected the stage of presentation among different racial/ethnic groups in our patient population. These disparities may lead to differences in disease burden and in prognosis across groups. Given the large number of Spanish-speaking patients served at our institution, we sought to examine how language barriers influenced patients' stage at initial presentation. We hypothesized that patients who were primarily Spanish speakers would have less access to breast cancer screening and would thus likely present at a later stage of disease.

Methods

A retrospective chart review was performed on all patients treated for breast cancer at a private institution over a 36-month period. Data were collected on patients treated between January 2006 and December 2008. Patients were excluded if their initial surgery, radiation, or chemotherapy was done at an outside facility or if their stage of breast cancer on presentation was

indeterminate. Patients were included only if their initial treatment occurred at our facility, allowing the stage at presentation to be verified. The data collected included the stage at which the patient's disease was diagnosed and their treatment method. Patient variables such as age, sex, race, primary language spoken, possession of a Social Security number, and insurance status were obtained. Particular attention was paid to the population of people whose primary language was Spanish. All groups were analyzed by stage at presentation. Primary language was defined as the language the patient speaks most fluently and feels comfortable using. For many of these patients, the primary language is the only language they speak. With regard to discovering whether the patients whose primary language was Spanish were newly immigrated, we determined whether or not the patients possessed a Social Security number. If the patient possessed a Social Security number, they were hypothesized to be either have born US citizens or to have been in the United States for a significant period of time in order to obtain such documentation. Patients were separated on the basis of whether they presented at stage III or greater, as since Surveillance, Epidemiology, and End Results data suggest that prognosis becomes dramatically less favorable at stage III. Finally, our results were analyzed using a Mann-Whitney *U* test to determine statistical significance.

Results

After exclusion, there were 170 patients. All of the 170 studied patients were female. The average age of the patients was 61 years. Patient populations were evenly distributed among three major ethnicities: 68 (39%) were African American, 62 (36%) were white, 37 (23%) were Hispanic, and 3 (2%) were listed as

“other.” Of the entire studied group, 141 (83%) had health insurance and 29 (17%) had no insurance. Forty-nine (35%) of the insured patients were funded by either Medicaid or Medicare. Invasive ductal carcinoma and ductal carcinoma in situ were the prevailing pathologic diagnoses, together totaling 88% of all pathologic diagnoses. More than half of all studied patients (98 or 58%) presented with stage I disease or lower. In the white population, 6 (10%) presented with advanced stage disease (defined as stage IIIa or greater). Eleven (16%) African American patients presented with advanced-stage disease, whereas eight (22%) of the Hispanic patients presented with advanced-stage disease. Of all patients, only five (3%) had no Social Security number, indicating that the majority of the patients had lived in the U.S. long enough to obtain such documentation. All five patients without Social Security numbers were Hispanic.

White Patients

All of the patients in this group identified English as their primary language. With regards to stage at presentations, 40 (65%) patients presented at stage I or lower. Only six (10%) patients in this population presented at stage III or greater.

Ninety-four percent (58 of 62) of these patients were insured. When we looked at stage as a function of insurance, we saw that the insured population had similar results to the whole. Of the uninsured white patients, only one (25%) presented at stage III or greater.

African American Patients

All of the patients in this group identified themselves as primarily English speaking. Thirty-three (49%) patients in this group presented at stage I or lower, and 11 (16%) presented at stage III or greater.

Ninety-one percent (61 of 68) of this group was insured. Of the insured patients, 52% (32 of 61) presented at stage 0 and I, and 15% (9) presented at stage III or greater. When compared with their white counterparts, this is higher but not statistically significant ($P = .274$). Of the uninsured patients, only 14% (1 of 7) presenting at stage 0 or I, whereas 29% (6 of 7) who presented at stage III or greater.

Hispanic Patients

Seventy percent (26 of 37) of the Hispanic patients recorded Spanish as their primary language. Out of all Hispanic patients, only 20 (54%) were insured. Ninety-one percent (10 of 11) of the Hispanics who noted English as their primary language were insured; whereas only 38% (10 of 26) of Spanish-speaking patients had insurance.

Of the total Hispanic patients included, 22 (59%) presented at stage I or lower. Eight (22%) presented at stage III or greater ($P = .101$). When divided into insured and uninsured, 14 (70%) of insured patients presented at stage I or lower and 3 (15%) presented at stage III or greater. Of the uninsured patients in this population, 8 (47%) presented at stage I or lower and six (35%) presented at stage III or greater.

Of the patients presenting at stage III or greater, seven (87%) identified Spanish as their primary language. When we examined the patients whose primary language was Spanish, seven (27%) presented at stage III or greater ($P = .116$). Of uninsured Spanish-speaking patients, six (37%) presented at stage III or greater.

Discussion

Breast cancer prevention has been shown to decrease mortality by up to 32%.² This prevention not only saves lives but decreases the burden on society in terms of both health care costs and productivity. Many studies have shown that there is a disparity in access to health care based on socioeconomic factors such as poverty, inadequate education, and lack of health insurance.⁴ A summary paper by Moreland et al⁵ showed that insurance status was an important predictor of whether a patient received mastectomy versus breast-conserving treatment. This economic disparity is clearly seen in our study; 94% of white patients were insured but only 54% of Hispanic patients had health insurance. Furthermore, many studies have indicated that members of racial/ethnic minorities are at increased risk for these disparities. A recent study published in 2009⁶ analyzed mortality rates published by the American Cancer Society, and the National Cancer Institute Surveillance, Epidemiology, and End Results Program found that African American and Hispanic patients presented with more advanced disease than their white American counterparts.

Our study shows a similar trend, with both Hispanic and African American patients presenting at a more advanced disease stage compared to their white counterparts; 10% of white patients presented with advanced-stage disease, whereas 16% of African American and 22% of Hispanic patients presented with advanced disease. Our study also has brought to light something not mentioned in these previous studies: that patients whose primary language is Spanish are also at increased risk of presenting at a later disease stage. Twenty-seven percent of primary Spanish speakers in our study presented with late-stage disease. This effect was worsened in patients who were both uninsured and primary Spanish speakers (37%). Although our study was not large enough to show statistical differences in any of these variables, there were prominent trends showing Spanish as a primary language as a variable that may contribute to presenting with a late-stage cancer. This is important, as there has been an increase in the US Spanish-speaking population, especially among the southern states. According to the US Census Bureau, the Hispanic population in the United States has grown from 9.6 million in 1970 to 35.3 million in the 2000. Furthermore, the Hispanic population is projected to rise to 102.6 million by the year 2050.⁷ Many of this population will be taught Spanish as their primary language, and many will hold tightly to the cultural practices of their origin.

A recent study published by Beach et al⁸ showed that Spanish-speaking women benefited from telephone support intervention aimed at increasing cancer screening rates, which indicates that language is indeed an important factor in patient care. Our study further elucidates that communication is a sig-

nificant factor in patient care, and asks what measures must be taken to ensure that the Spanish-speaking population is included in preventative measures. This study did not address the etiology of Spanish speaking as a contributing variable to presenting at advanced stage breast cancer. Further studies are needed to explore the issues surrounding communication barriers as well as cultural factors that may be involved. Language is unlikely to be the only barrier. Patients who speak primarily Spanish are likely less integrated into the American culture and governmental systems, which may also play a role. As the Hispanic population continues to increase, research into understanding this group's perception of health care delivery will be essential. Specific factors that need to be addressed are the Spanish-speaking patient's access to information on preventative care, as well as studies on the attitudes and perceptions of breast cancer among this population.

We recognize the limitations of this study, as research was performed at one single institution with a rather high volume of Spanish-speaking patients. We also recognize that some of the patients who identified Spanish as their primary language may also have limited English skills. Socioeconomic factors, such as education and income, were not taken into account and may have affected the outcome of our study.

Because language barriers have been identified as an issue among patients at our institution, we have begun additional studies surrounding this topic. The first is a survey given to Spanish-speaking patients evaluating their ideas about communication with their doctors and other medical staff. The second is a study involving informed consent in the Spanish-speaking population and whether the communication between doctors and their patients with regard to procedures is adequate. We look forward to the results of these studies, and hopefully others from across the country to help identify modifiable factors that will contribute to more effective communication with Spanish-speaking patients.

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Summary

As we look into the future of medicine and ways to increase health care while lowering cost, disease prevention in the Spanish-speaking population must be taken into account. This study highlights the enormous need for further breast cancer prevention education targeted to a Spanish-speaking audience. We also need further research aimed at this particular population regarding the cultural and genetic factors that may play a role in the disease process.

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