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Trends of Breast Cancer in Ethiopia

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Abstract

Purpose: The essence of this study is to illustrate the trends of breast cancer among women living in different regions of Ethiopia and to offer suggestions about some measures to put in place to control the disease and reduce its morbidity and mortality.

Methods: Data were collected from October 2014 to April 2015. Data on new cases of breast cancer registered annually at the cancer registry of the Tikur Anbessa Specialize Hospital (TASH) over a period of sixteen years were obtained retrospectively and analysed using MS office and SPSS Version 20.

Results: There were 3460 new cases of breast cancer registered at the cancer registry during the16-year period. The peak age of incidence was the 4th and 5th decade. Most of the cases were found in Addis Ababa, where the hospital is situated. An increase in trend of breast cancer case was observed in the hospital.

Conclusion: Non-declining incidence of breast cancer in this study indicates; the awareness of people to be diagnosed is improved and more cancerous patients are there in the country, and inadequate or ineffective control measure to stem its morbidity due to diversion of the health care system's attention to HIV/AIDS and malaria. Therefore, there is the need to step up activities through NGOs, screening programs and trainings such as mammography, clinical and self- examination, to control the upward trends of breast cancer in the country. In addition, it will be important to open breast cancer diagnosing centre in each region of the country in order to know the number of cases, which will be affected by being undiagnosed due to farness to the diagnosing centre. Additional researches on breast cancer post treatment survival rate, on risk factors assessment, patient quality of life and others are recommended in future.

Keywords: Breast cancer; Tikur Anbessa Specialize Hospital (TASH); Trend analysis

Introduction

Cancer is a group of diseases characterized by the uncontrolled growth and spread of abnormal cells. If the spread is not controlled, it can result in death [1]. According to GLOBOCAN 2012, an estimated 14.1 million new cancer cases and 8.2 million cancer-related deaths occurred in 2012, compared with 12.7 million and 7.6 million, respectively, in 2008. One of the most commonly diagnosed cancers worldwide was breast cancer which accounts 1.7 million (11.9%) of the total [2], and it is increasing particularly in developing countries where the majority of cases are diagnosed in late stages [3].

Breast cancer is the most common cancer in women worldwide, with nearly 1.7 million new cases diagnosed in 2012 (second most common cancer overall). This represents about 12% of all new cancer cases and 25% of all cancers in women [4]. In low and middle income countries (LMCs), the infrastructure and resources for routine screening mammography are often unavailable. In such lower resource settings, breast cancers are commonly diagnosed at late stages, and women may receive inadequate treatment, pain relief, or palliative care [5,6]. Because breast cancer is often diagnosed in late stages in women in LMCs, mortality rates are often much higher compared with rates in developed countries [7-9].

Epidemiologists have documented many risk factors for the development of breast cancer. Exposure to exogenous hormones as oral contraceptives, hormone replacement therapy [10] and dietary fat intake [11,12] result in an increase in the risk of breast cancer. Despite recognition of all these risk factors, about 70% of females who develop breast cancer do not have identifiable risk factors [4]. However, the most significant risk factors for breast cancer are gender (being a woman) and age (with most cases developing in women after menopause [13-15]. In countries around the world, preventable risk factors for breast cancer such as physical inactivity and excessive alcohol consumption as well as cultural factors are important to consider [12]. In some African countries, for example, there may be a belief that breast cancer is caused by social misbehaviour such as oral or nipple contact, or woman wearing dirty clothing or putting money inside her bra. Also, there is a belief that once a woman is diagnosed with breast cancer, she may be divorced by her husband and possibly rejected by the community, or that following a breast cancer diagnosis her breast will be cut off and she will die. As a result of misconceptions and unfounded beliefs, women may tend to hide their breast cancer symptoms at the early stages when treatment is most likely to be effective [9]. The above reasons and others like changing in life styles and lack of clinical advances to combat the disease, especially in developing countries, leads the trend of the disease to increase from year to year [2]. Therefore, the essence of this study is to illustrate the trends of breast cancer among women living in different regions of Ethiopia and to offer suggestions about some measures to put in place to control the disease and reduce its morbidity and mortality.

Methods

The study was conducted at Tikur Anbessa specialized hospital (TASH), oncology unit. TASH is a large referral teaching hospital, under the administration of Addis Ababa University, located in Addis Ababa, Ethiopia. It has divisions such as internal medicine, surgery, gynaecology and obstetrics, paediatrics, radiotherapy, adult oncology, paediatric oncology /haematology, nuclear medicine, psychiatry, laboratory, orthopaedics, pharmacy etc. The hospital has 700 beds and give diagnostic and treatment service for about 370,000-400,000 patients per year. The oncology unit of TASH is the only oncology unit for the country and has an outpatient department which gives service to new and follow-up patients and an in-patients department which has 19 beds.

Data were collected from October 2014 to April 2015 using the cancer registry. Data on new cases of breast cancer registered annually at the cancer registry of the Tikur Anbessa Specialize Hospital (TASH) over a period of sixteen years were obtained retrospectively and analysed using MS Excel and SPSS version 20. The data were illustrated in table and the trend of the cases within the sixteen years was drawn using graphs.

Ethical approval for this study was obtained from the Institutional Review Boards of Addis Ababa University Medical Faculty. The study was conducted without individual informed consent because it relied on retrospective data (Note: Even if we tried to incorporate % of population relative to study years, it was difficult to get the number of population each months of the study years. It was impossible to find the percentage of population as well as the effect of change in population size on breast cancer incidence. This is because in Ethiopia census done every five years.

Result and Discussion

Over a period of sixteen years, 1997-2012, more than 50 cancer types, a total of 16,622 new cases were registered in TASH. Out of this, 3460 (prevalence=20.8%) were new cases of breast cancer representing approximately 216 cases per annum. This is at variant to the report of an earlier study by Tessema carried out in the same Centre, using surgical pathology registers, where 137 cases were registered over a period of 5-years giving annual rate of 27.4 cases of breast cancer [16]. Breast cancer was high among males as M:F ratio is 1:15 which is lower than from Finland, Norway and Philippine, where cancer occurs more in women with an M:F ratio of about 1:80 [17]. The peak age of incidence of breast cancer in this study (Table 1 and Figure 1) was the 4th and 5th decade (30-49 years) which accounts for more than 60% (2076) of all cases and that supports the reports from Kenya and South Africa [17], but lower than reports from Norway and among the Philippines which have 6th and 8th decade respectively [18,19]. In developed countries, more than two-thirds of breast cancer cases are diagnosed in women aged 50 years and older [20], but in contrast, in this study we found that more than 70% of the

Ages	Total	Percentage (%)
<20	8	0.23
20-29	344	10.10
30-39	1108	32.02
40-49	1004	29.02
50-59	555	16.29
60-69	311	9.13
≥ 70	130	3.82
Total	**3406**	**100.00**

Table 1: Breast cancer patients distribution by age group.

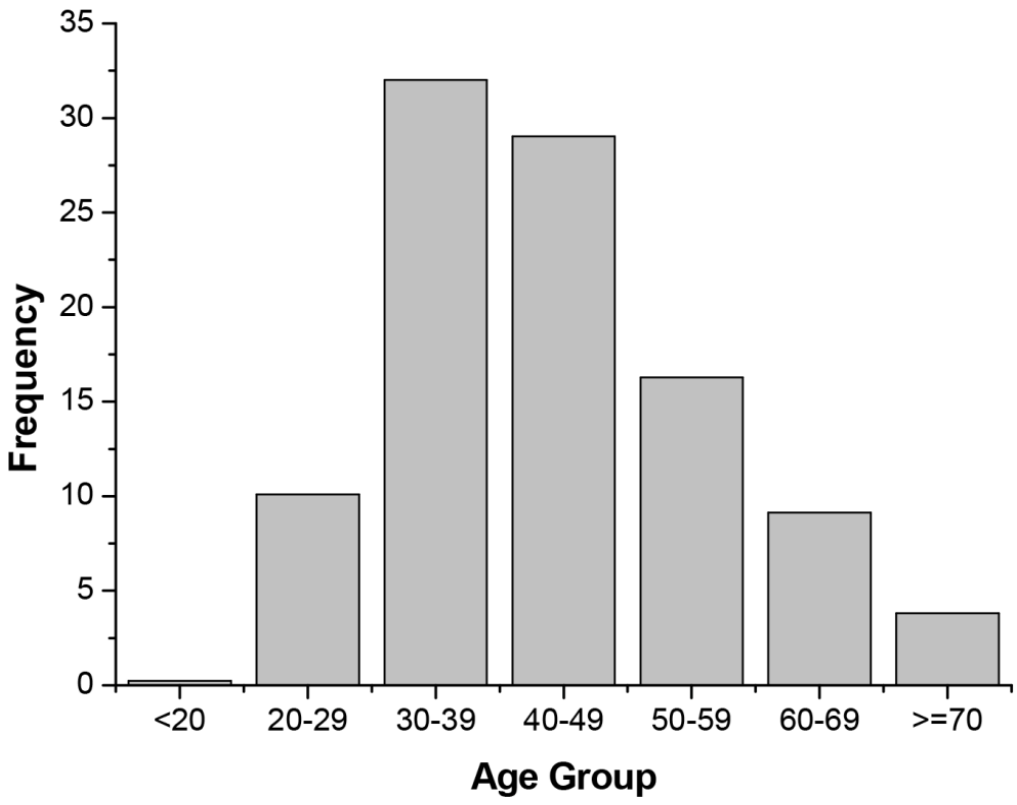

Figure 1: Breast cancer patients distribution frequency by age group.

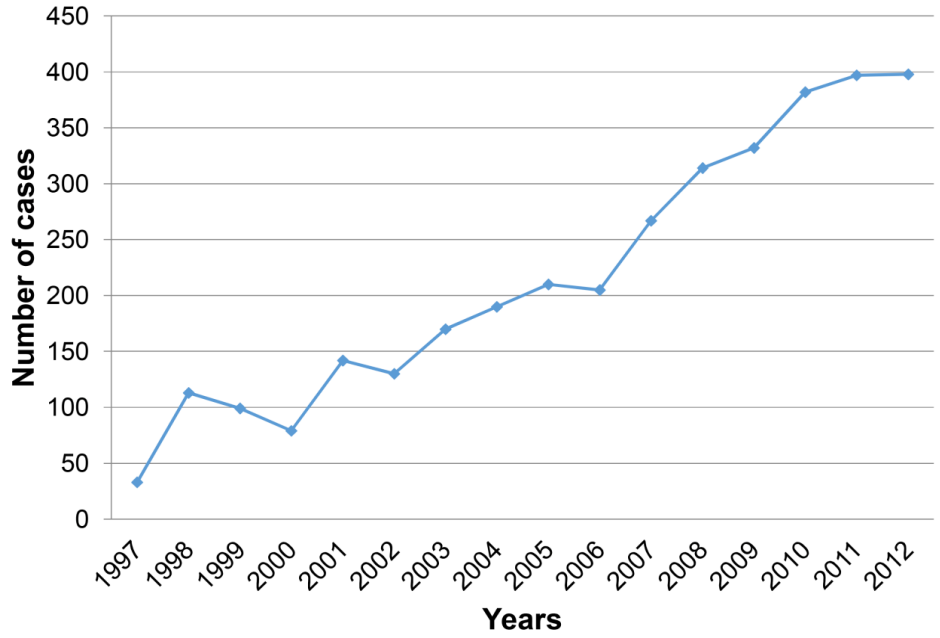

Figure 2: Trend of breast cancer in Ethiopia for the years 1997-2012.

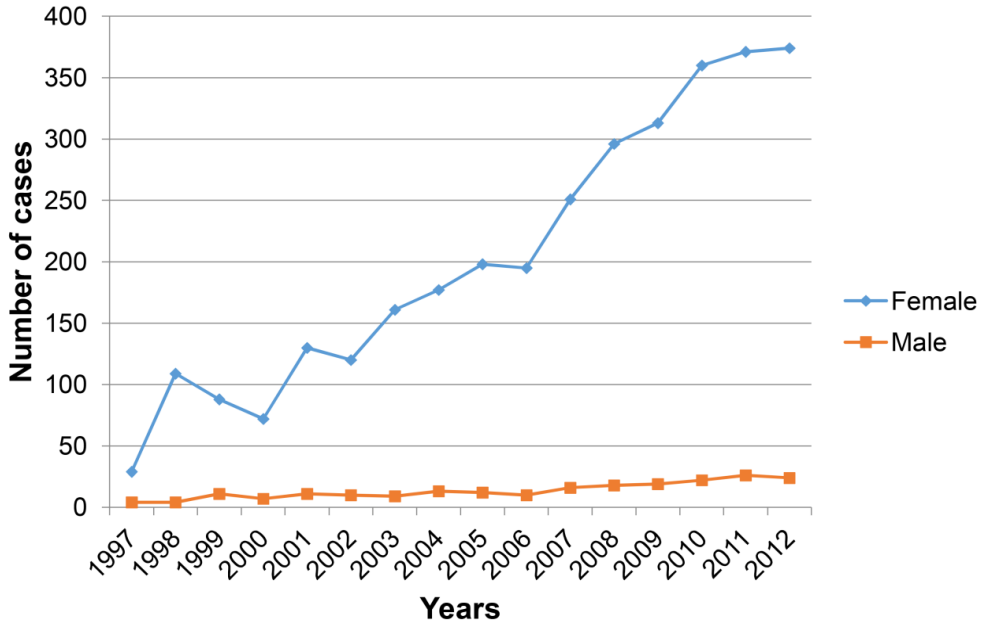

Figure 3: Trend of breast cancer in each sex for the years 1997-2012.

cases were diagnosed below 50 years of age which is almost similar in other developing countries like Sudan (74%), Libya (71%), and Ghana (54.2%). This may be due to practice of physical activity, breast feeding patterns, differences in alcohol consumption and diet.

The trend of breast cancer in the sixteen years is given in figure 2. As it is shown in the figure, the number of cases generally increases from year to year. The increase in number of cases from year to year may be due to the increase in the awareness of the people to be diagnosed. If it is to be looked with respect to sex (Figure 3), females show significant increase from year to year, in general, than males. Since Tikur Anbessa Specialized Hospital (TASH) is the only hospital in the country where cancer patients can be diagnosed and treated, the number of cases in Addis Ababa, where TASH is situated, is large. The number of cases in other regions of the country depends on their distance from Addis Ababa; the more far the region, the less the number of cases, because the patients may not get the opportunity to go and diagnosed. This can be illustrated in the following figures (Figures 4 and 5). Those patients who are relatively near to the hospital, such as patients in Addis Ababa, Oromia, and Amhara, are able to go the hospital and diagnosed. But, those patients who are far from the

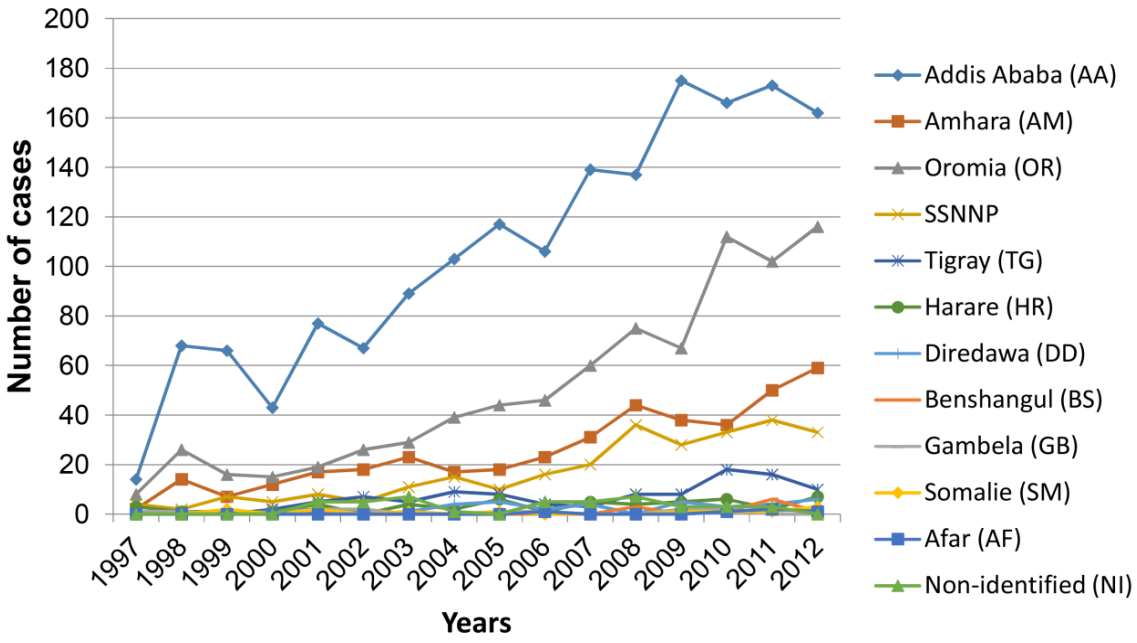

Figure 4: Trend of breast cancer in each region of Ethiopia for the years 1997-2012.

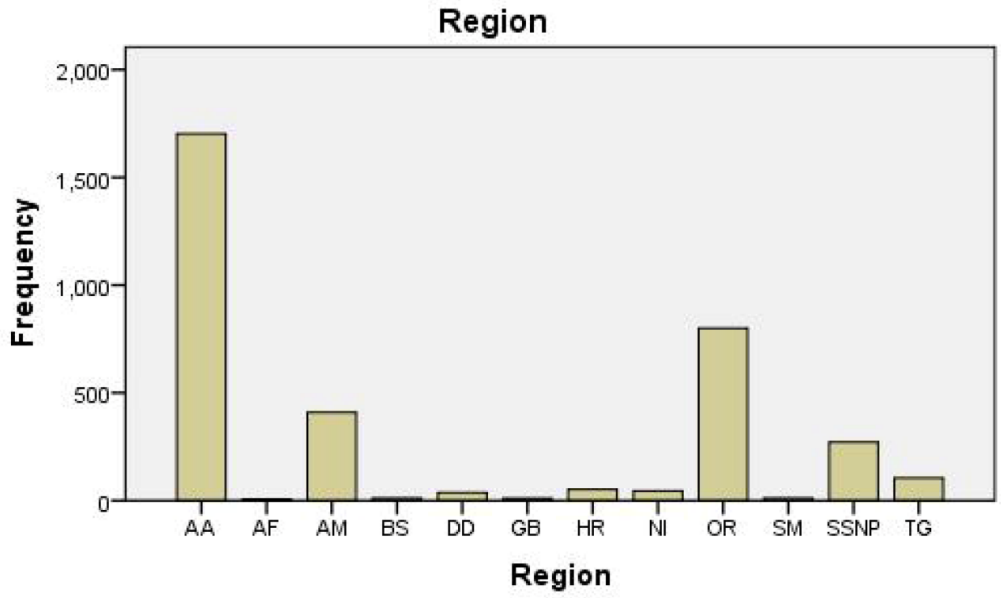

Figure 5: Breast cancer distribution frequency in each region of Ethiopia.

hospital are not able to go the hospital easily due to many reasons like transportation cost, accommodation, job and family related cases, etc. If we see specifically in each region, again there is an increase in number of cases from year to year, in general. This may be due to an increase of awareness within the people about the disease. The other reason may be due to diversion of the health care system's attention to other diseases like HIV/AIDS, malaria, etc.

Since breast cancer belongs to the group of cancers that are treatable if diagnosed early, non-declining incidence of breast cancer in this study indicates; the awareness of people to be diagnosed is improved and more cancerous patients are there in the country and inadequate or ineffective control measure to stem its morbidity due to diversion of the health care system's attention to HIV/AIDS and malaria. Therefore, there is the need to step up activities through NGOs, screening programs and trainings such as mammography, clinical and self-examination, to control the upward trends of breast cancer in the country. In addition, it will be important to open breast cancer diagnosing centres in each region of the country in order to know the number of cases, which will be

affected by being undiagnosed due to farness to the diagnosing centre. Additional researches on breast cancer post treatment survival rate, on risk factors assessment, patient quality of life and others are recommended in future.

This hospital based cancer registry was older which needs integration with WHO international Coding system and now it is a mandatory to restart cancer registration by independent unit.

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