Five and Ten Years Survival in Breast Cancer Patients Mastectomies vs. Breast Conserving Surgeries Personal Experience

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Abstract

Background: Breast carcinoma is the first malignancy among Iranian ladies and the second cause of death due to cancers after gastric carcinoma. According to the World Health Organization the annual incidence rate of breast cancer will rise 1.8 to 2 percent. It is one of the most important health problems. Five year survival is one of the indicators used for evaluation of the quality of care to different types of malignancies. In this study we decided to compare the result of mastectomy and breast conserving surgery in the survival of patients with breast carcinoma..

Methods: This is a retrospective study using data from breast carcinoma cases in a private clinic under supervision of the author during years 1994 until 2007. These cases base on the clinical status underwent surgery as mastectomy or breast conserving with other necessary treatment. The number of patients with acceptable follow up was 464 cases that 441 were included to define survival. The data were analyzed by SPSS and survival estimated by Kaplan Mayer method.

Results: Survival curve was estimated for 441 cases of them, six cases were men and the age of patients was 22 to 104 years old with average of 53.24 years and standard deviation of 12.41. The most cases were among 45-55 years old. Five and ten years survival for all cases was 81 % and 77% respectively. These data for mastectomies patients was 78 and 70 percent and for breast preserving cases was 86 and 78 percent which was not significant in log rank test with p-value equally 0.13. There was no significant difference between mastectomies patients versus breast preserving cases in all clinical stages although the crude data shows better situation in breast preserving surgery (BPS).

Conclusion: Breast cancer is one of the most important health problems, nowadays breast preserving surgery is choice treatment for stage I and II throughout the world. In this study overall 5 years survival was 81% comparable with developed countries with different health delivery system and quality of care and it is much better than other reports from Iran, regional and comparable countries. Because of many reasons such as physical, social and psychological effect of BPS, we recommend it as the best choice for managing breast cancer patients in stage I and II and even III in clinically approved cases in Iran similar to other countries.

Keywords: breast cancer, survival, mastectomy

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Introduction

Breast cancer is the most prevalent malignancy among Iranian females and the second cause of death due to cancers after gastric carcinoma.

Incidence of breast carcinoma is 10 per 100,000 of population with 7000 new cases annually in Iran. The age specific rate in females is 23.16/100,000 (1). Every year 1200 women die due to breast carcinoma (2) with burden of 0/31 DALY/1000, which is the third in ranking of burden of disease (BOD) among women and seventh rank in both sexes (3).

It is expected that the number of new cases will rise up to 20,000,000 by 2015 globally and 12,000,000 deaths annually 70% of which will occur in developing countries (4). According to the World Health Organization the annual incidence rate of breast cancer will rise 1.8 to 2 percent.

Survival is the time period between diagnosis and death or last visit of the patient. Five year survival is one of the indicators used for evaluation of the

quality of care to different types of malignancies. However, due to slow growing nature of breast cancer and possibility of early diagnosis, ten years survival is considered as another suitable indicator for evaluation of the care. Survival of the patients depends on determinants such as: age (5-7), race, genetic background, socioeconomic status (8), quality and quantity of care.

The authors has reviewed the 5 and10 years survival of breast cancer patients visited in their private clinic from 1994-2007 who had undergone mastectomy or Breast Preserving Surgery (BPS).

Methods and materials:

This is a retrospective study. The records of all cases of breast cancer referred to the clinic during the period were reviewed and the available data summarized in "Summary Data Sheets". The following criteria were set as "Acceptable Follow up":

- once every 3 months in the 1st year after surgery
- minimum twice a year in the 2nd year after surgery up to 10th year
- minimum one annual visit after the 10 year

When and where necessary the patients have received care accordingly.

576 records were reviewed out of which 464 records met the acceptable follow up criteria. Applying the definition of survival 441 records were classified as acceptable cases for evaluating survival. 23 cases were older cases that have been included to this study from the author's previous clinic and had a regular follow up more than 13 years.

All cases under review had undergone either mastectomy or BPS according to the status of the disease. These patients have also received other necessary treatments such as chemotherapy, radiation therapy, hormone therapy and palliative care as required. The data were analyzed by SPSS software version 16 and survival estimated by Kaplan Mayer method.

Results:

464 breast cancer cases were included in the study and survival curve was estimated for 441 cases of them, six cases were men and the age of patients was 22 to 104 years old with average of 53.24 years old with standard deviation of 12.41 which at least five years are younger than patients who are reported from developed countries. Seventy and one cases were died during follow up period. The age distribution and death status is demonstrated in table 1; as you can see the age was available for 427 cases.

Table 1: Age and death distribution of the breast cancer patients

Age Groups (years)	Number	Dead
<25	1	0
25-34	26	0
35-44	82	10
45-54	135	24
55-64	109	20
>65	74	17
Total	427	68

The most cases were among 45-55 years old who are five years younger than patients in developed countries.

Follow up period was differed from zero to 293.5 months with average of 50.5 months. Five and ten years survival for all cases was 81 % and 77% respectively (Figure1).

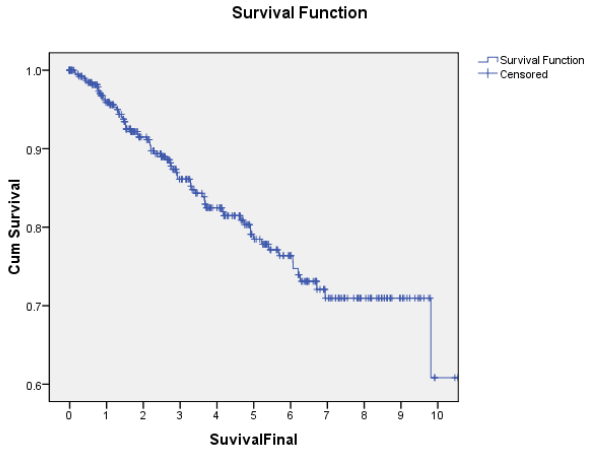

Fig.1: Overall Survival for Breast Cancer Patients

These data for mastectomies patients was 78 and 70 percent and for breast preserving cases was 86 and 78 percent which was not significant in log rank test with p-value equally 0.13 (Figure 2).

Survival changes were not significant statistically among all ages group which is important finding.

In the clinical staging distribution 18.4% were stage I, 36.1% stage II, 27.7% stage III, and 17.7% stage IV, it means 54.5% of patients were locally controlled cases and 45.5% were advanced with better status rather than other reports from Iran and regional countries(9,10). In comparison between two surgical methods in any clinical staging there was no significant difference between mastectomies patients versus breast preserving cases in all clinical stages although the crude data shows better situation in BPS

cases P-Value for stage I, II, III, and IV was 0.4, 0.8, 0.4 and 0.1 respectively.

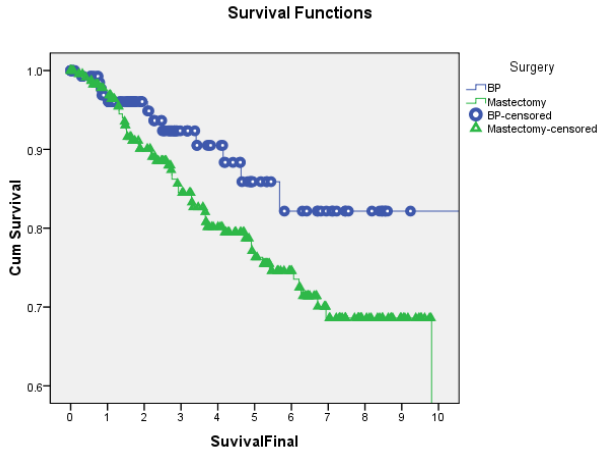

Fig.2: Survival Curve for Mastectomies vs. Breast Preserving Cases

In table 2 the number of mastectomies and breast preserving cases by clinical staging are demonstrated.

Table 2:Total Number and dead cases in BPS vs Mastectomies by Clinical Staging Status

Stage	Surgery (number)		Dead (number)	
	BPS	Mastectomy	BPS	Mastectomy
1	36	33	1	3
2	55	82	1	7
3	29	76	1	10
4	15	46	9	31
Total	135	237	12	51

Discussion:

Breast cancer as the first cause of malignancy in Iranian female such as many other countries is one of the most important health problems here and there.

Nowadays breast preserving surgery is the treatment of choice for stage I and II throughout the world (11) and useful for other stages base on clinical situations. Here in Iran BPS is not well popular among Iranian surgeons so we compared the survival for two types of surgeries with very informative and supportive results. BPS is most appropriate surgical procedure for stage I and II and may be the appropriate surgery for stage III because of the size of the Iranian female breast which allows surgeons to do that in a higher stages.

Dr. Rastgoi and his co-workers showed that because of demographic changes and other determinants the number of malignant cases will rise up to 181% during next 15 years in the region. In Iran demographic changes play an important role, Fig.3 is the population pyramid in Iran from the last national census and confirms the demographic changes to support rising the number of breast cancer among Iranian ladies nationally (12).

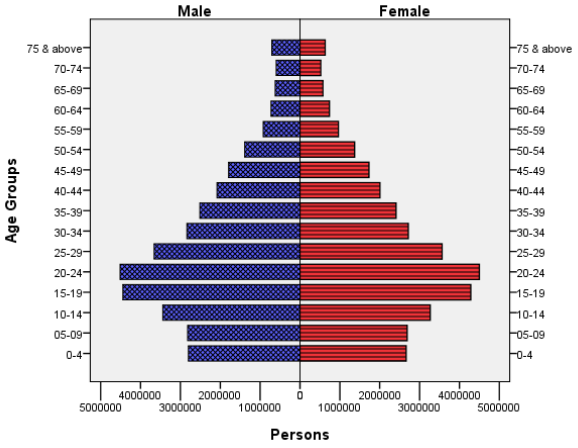

Fig.3: National pyramid of population in Iran, 2006

In this study overall 5 years survival was 81% comparable with developed countries (13,14,15) with different health delivery system and quality of care and it was higher than other reports from Iran, regional and comparable countries such as Turkey with (77.5%), Thailand(62.9%), India(48%), Singapore (76.4%),and Korea with 77.5%(16,17,18,19,20). this is a personal experience in a private clinic and may not be able to compare with national data, but it means that quality of care and follow up is an important issue to gain better survival in breast cancer patients.

Because of many reasons such as physical, social and psychological effect of BPS, we recommend it as the best choice for managing breast cancer patients in stage I and II and even III in clinically approved cases in Iran similar to other countries.

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