ORIGINAL ARTICLE

Size Discrepancy of Residual Tumor between Post Chemotherapy Sonography And On Post Excision Histopathology after Neo Adjuvant Chemotherapy (NAC) and its impact on 5 Years Disease Free Survival

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ABSTRACT

Aim: Size discrepancy of residual tumor between post chemotherapy sonography and on post excision histopathology after neo adjuvant chemotherapy (NAC) and its impact on 5 years disease free survival.
Methodology: The date was retrospectively reviewed between Jan 2012 to Dec 2012. Total 88 patients were included. All patients received chemotherapy before surgery. Both mastectomy and BCS were included. Ultrasound examination was done before surgery and final H/P sizes were noted. Discrepancies lesser than 10mm were ignored b/c of operator dependency and b/c both were different mode of examinations.
Results: Out of 88 patients 22 (25%) showed zero discrepancy, 45 (51%) patients showed discrepancies lesser than 10mm. 21(23%) patients showed more than 10mm discrepancy. Out of these 21 patients, in 9 patients ultrasound showed lesser size and in 12 patients ultrasound showed larger size. Largest discrepancy was shown to be 100mm in which ultrasound showed no lesion (occult) however on final H/P it was 100mm. Second largest discrepancy was 48mm in which ultrasound showed 48mm tumor size, however, final H/P showed no tumor (occult). All patients were followed for 5 years. Total 30 patients out of 88 (34%) showed recurrence.
Conclusion: The ultrasound examination by large is a sensitive mode for determining size of tumor after NAC as shown in our study.
Keywords: Neo adjuvant chemotherapy, ultrasound, discrepancy

INTRODUCTION

Neo adjuvant chemotherapy (NAC) is now used as treatment of breast cancer. NAC results in shrinkage of tumor. Due to shrinkage of tumor, conservative surgery is possible and cosmetic results are better[1, 2].

When NAC is completed, clinical examination and ultrasonography is done to observe the response of NAC and conservative surgery is possible[3]. On surgical specimen, size of tumor is the actual size of tumor after NAC. USG examination is mostly but not always shows actual tumor size and may lead to some gross discrepancies[4,5].

The aim of the study is to find the percentage discrepancy in every case between radiological and pathological size after chemotherapy completion and thus a surgeon need to be cautious in planning surgery based on radiological size as it can have an impact on success of surgery in term of attaining negative margins.

Size discrepancy: It is the discrepancy between the size given on ultrasound and the size given on final histopathology on resected surgical specimen (the actual size), the discrepancy will be measured in percentages.

Received on 21-01-2020
Accepted on 13-06-2020

Residual tumor: The tumor left after the Neo adjuvant chemotherapy

Five years disease free survival: Patients who remained disease free (Local and distant disease) after 5 years of initial treatment

METHODOLOGY

One year single-center retrospective review was performed on all patients of breast cancer who received Neo Adjuvant Chemotherapy (NAC) presented at Shaukat Khanum Memorial Cancer hospital and Research Centre, between 1-1-2012 to 31-12-2012. This study was conducted in Shaukat Khanum Memorial Cancer Hospital and Research Center from 1st January 2012- 31st December 2012.

Sample selection: Simple consecutive sampling

Inclusion criteria: All patients diagnosed with invasive breast cancer who received NAC

Exclusion criteria: Patients with recurrent disease

Data collection and Analysis: Data collection was done using a Performa. Data analysis was done using SPSS version 21

RESULTS

The detail of results is given in tables 1, 2

Table 1: Percentage discrepancies

Discrepancy	n	%age
Zero	22	25%
<10mm	45	51%
>10mm	21	24%
Total	88	100%

Table 2: Five years Response

Recurrence	n	%age
Present	30	34%
Not present	58	66%
Total	88	100%

DISCUSSION

In our study, out of 88 patients, 22 cases (25%) showed zero discrepancy, 45 cases (51%) showed discrepancies lesser than 10mm. 21(23%) patients showed more than 10mm discrepancy. Out of these 21 patients, in 9 patients ultrasound showed lesser size and in 12 patients ultrasound showed larger size. Largest discrepancy was shown to be 100mm in which ultrasound showed no lesion (occult) however on final H/P it was 100 mm. Second largest a discrepancy was 48mm in which ultrasound showed 48mm tumor size, however, final H/P showed no tumor (occult). All patients were followed for 5 years. Total 30 patients out of 88 (34%) showed recurrence.

Sannachi et al showed NAC response on tumor size with an accuracy of 79%, 86%, and 83% at 1st week, 4th week and 8th week of the chemotherapy respectively[6].

In another study by Sadeghi N et al[7]. used USG on a group of 100 patients. Their results showed that USG is able to show the response of chemotherapy in patients with breast cancer in four and eight weeks after the start of the chemotherapy.

CONCLUSION

The ultrasound examination is a sensitive mode to see size of tumor after NAC as shown in our study, 79% showed insignificant discrepancy. However in some cases due to tumor lysis it may not appear discrete measurable entity and may show significant discrepancy (both over and under stating).

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