Quality of life assessment after breast cancer treatment using EORTC QLQ-C30 and BR23 questionnaire: a prospective study from a tertiary care centre in north India

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Introduction

- Breast cancer (BC) is the most common cancer affecting women worldwide. Its incidence is on the rise in India (22.9%) and presently it is the second most frequently diagnosed cancer in women after cervical cancer.
- Measuring quality of life (QoL) in BC patients is of importance in assessing treatment outcomes. This study examined the impact of breast cancer treatment on QoL

Material and Methods

- This was a prospective study of QoL in BC patients following completion of treatment which included surgery, chemotherapy and radiation therapy.
- QoL was measured using the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ-C 30) and its breast cancer supplementary measure (QLQ-BR23) **at three points in time: three months, one year and two years after completion of treatment.**
- Total 56 patients were enrolled in the study.
- Socio-demographic and clinical data included: age, education, marital status, disease stage and initial treatment.

Statistical Analysis

- Data analysis was done using SPSS 25.0. Shapiro Wilk test was employed to check the normalcy of the continuous variables.
- Normally distributed data was presented as mean and standard deviation (SD).
- The distribution of results for HRQoL instruments was slightly skewed. Therefore, non-parametric tests (Friedman test) were used in the analyses.
- Data are presented using box plot.
- Statistical analysis was implemented at two sided with a 0.05 significance level.

Results

- Demographic profile is shown in Table 1.
- Median score of global health status improved during follow-up {58(50-67) vs 75(66-75) vs 83(75-83), p =0.001}. (Figure 1a)
- All of the functional dimension scores showed significant improvement between measurements at 3, 12 and 24 months, except social functioning where there's a trend of improvement, {75(0-23) vs 66(50-100) vs 75(767-92), p =0.16}. (Figure 1b)
- Although there were deteriorations in patients' scores for body image and sexual enjoyment, (Figure 2a,2b) there were significant improvement for breast symptoms and systemic therapy side effects. (p =0.001)
- In functioning scale; physical, cognitive, emotional, social and role functioning improved.
- However, in symptoms scale, fatigue was the most common problem experienced by the patients even after 2 years of surgery followed by financial difficulties and arm symptoms. (Figure 3a, 3b, 3c)

| Variables	Percentage
Age (yrs)	
31-40	29%
41-50	41%
51 and above	30%
Mean ± SD 46.91±10.10, Range 31-70yrs	
Educational status	
Illiterate	28.6%
Primary level	07.1%
Middle level	12.5%
10th level	17.9%
12th level	10.7%
Graduate level	23.2%
Breast Surgery	
Mastectomy	86%
Breast Conserving therapy	14%
Type of family	
Nuclear	78%
Joint	22%
Habitant	
Rural	52%
Urban	48%
Monthly family income	
<10,000	62%
>10,000	38%
Menstrual status	
Premenopausal	49.0%
Postmenopausal	51.0%
Laterality	
Right	53.6%
Left	46.4%
Disease stage	
IIA	35.7%
IIB	32.1%
IIIA	21.4%
IIIB	10.7%
Tumor Grade	
I	09%
II	48%
III	43%
Chemotherapy Regimen	
Anthracycline based	14%
Anthracycline+taxane	73%
CMF+ Trastuzumab	13%
Radiotherapy	
35Gy/40Gy/15#/3wks/2wks	56%
35Gy/40Gy/16#/3wks/4wks	24%
34Gy/10#/2wks	20%
Hormonal therapy	
Yes	25%
No	75%
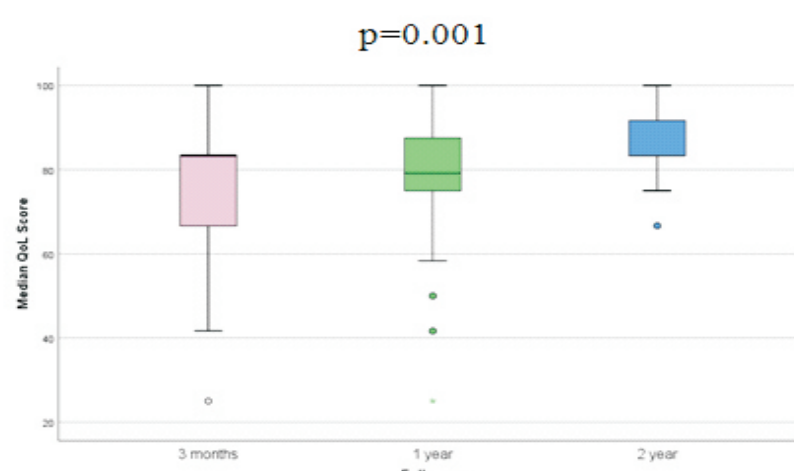
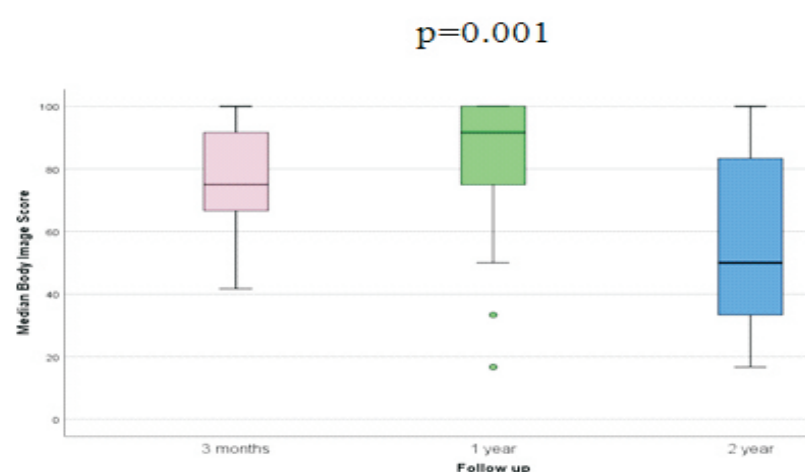Figure 1a: Global quality of life
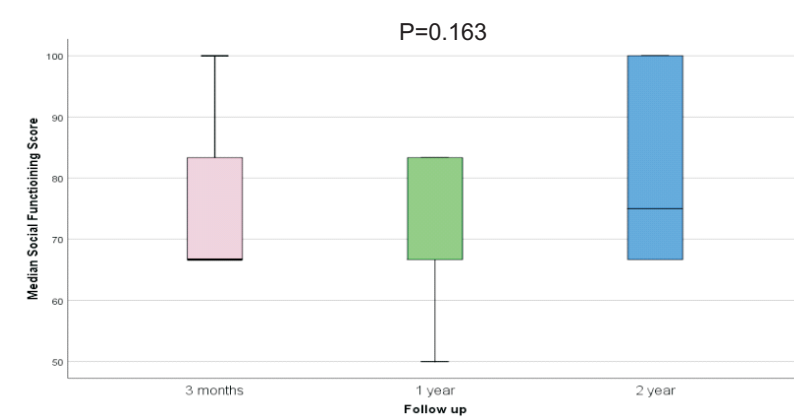
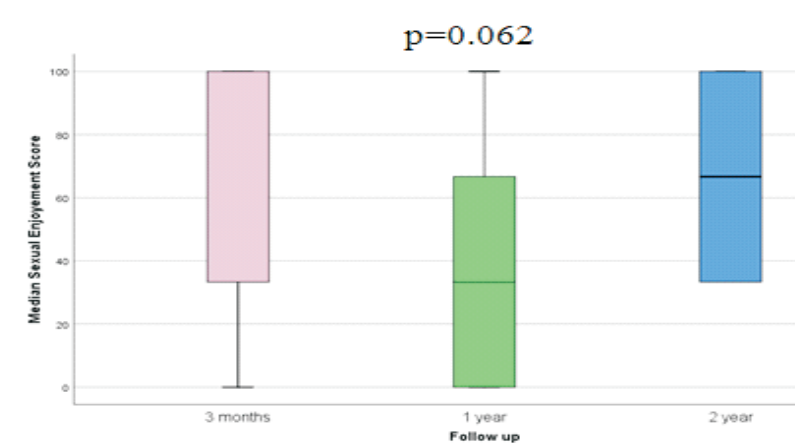Figure 1b: Social Functioning

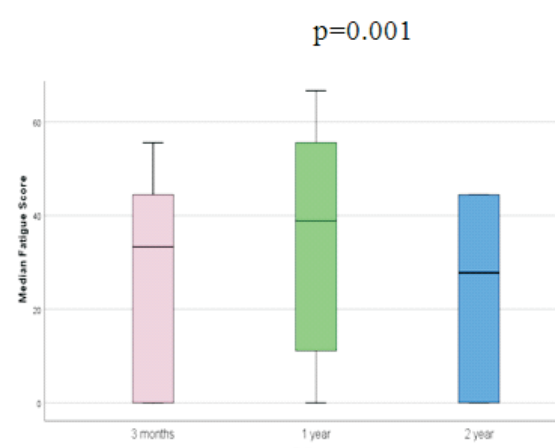Figure 2a: Body image

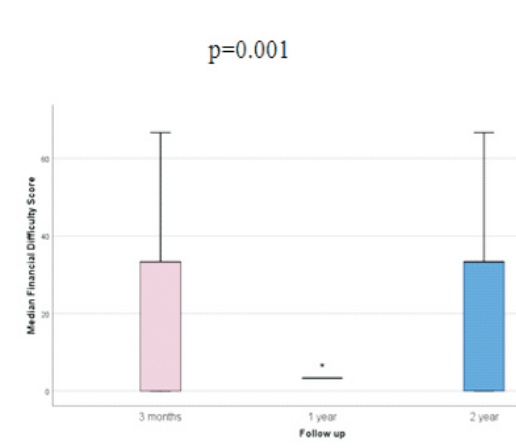Figure 2b: Sexual enjoyment

Figure 3a: Fatigue
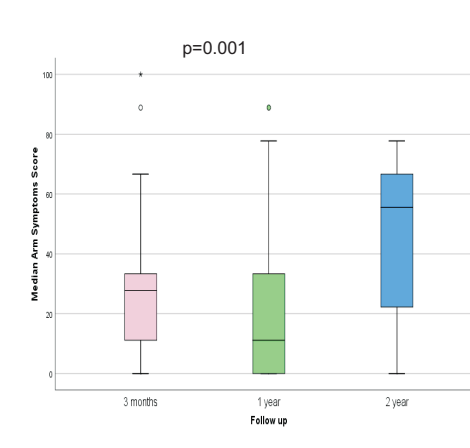

Figure 3b Financial difficulties

Figure 3c: Arm symptoms

Conclusion

Overall quality of life has been improved globally after breast cancer treatment from 3 months to 2 years. However, fatigue and arm symptoms need supportive treatment on follow up.