



MULTICENTER CROSS-SECTIONAL STUDY COMPARING QUALITY OF LIFE, BODY IMAGE AFTER BREAST CANCER SURGERY

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Goals

Current guidelines propose both breast conserving surgery (BCS) and mastectomy with or without reconstruction in early breast cancer patients. Although a more conservative surgical approach aims to improve post-operative quality of life (QoL), multiple studies have failed to show a clear benefit. This study uses an extensive database of a post-operative QoL survey in Flanders to discover small but significant differences in quality of life and body image between BCS, mastectomy and mastectomy followed by reconstruction.

Methods

- Early breast cancer patients
- 8 breast cancer clinics
- EORTC QLQ-30, BR-23, Body Image Scale
- Univariate and regression analysis

Results

Selected patient characteristics are listed in table 1:

We analyzed data from 655 breast cancer patients. Patients characteristics were significantly different between treatment groups (table 1). Global health status showed an advantage of mastectomy with reconstruction patients, but this was not significant ($P=0.066$). Body image was significantly better in BCS patients compared to both mastectomy groups, which showed no significantly different scores (table 2). Multivariate analysis (not shown) did show a clear beneficial effect of BCS on global health scores compared to the mastectomy without reconstruction group ($P=0.002$), but not in comparison with the mastectomy with reconstruction group. Body image scores stayed in favour of BCS in multivariate analysis.

	Mastectomy without reconstruction	Mastectomy with reconstruction	Breast Conserving Surgery	Totals
N	180 (27.5%)	100 (15.3%)	375 (57.2%)	655
Mean age (\pmsd)	56.1 (\pm 8.9)	49.4 (\pm 8.9)	54.7 (\pm 9.1)	54.3 (\pm 9.3)
Breast cup size (EU sizes)				
A	26 (17.7%)	6 (7.1%)	21 (6.5%)	53 (9.5%)
B	70 (47.6%)	50 (58.8%)	133 (40.9%)	253 (45.4%)
C	35 (23.8%)	22 (25.9%)	111 (34.2%)	168 (30.2%)
D	12 (8.2%)	6 (7.1%)	49 (15.1%)	67 (12.0%)
E	4 (2.7%)	1 (1.2%)	8 (2.5%)	13 (2.3%)
F	0 (0%)	0 (0%)	3 (0.9%)	3 (0.5%)
M*	33	15	50	101
				C>A and C>B
Tumour size				
T1	47 (43.1%)	26 (41.9%)	205 (75.1%)	278 (62.6%)
T2	47 (43.1%)	26 (41.9%)	63 (23.1%)	136 (30.6%)
T3	15 (13.8%)	10 (16.1%)	5 (1.8%)	30 (6.8%)
M*	71	38	102	211
				A>C and B>C
Nodal +ve.				
No	68 (45.0%)	41 (46.6%)	219 (65.4%)	328 (57.1%)
Yes	83 (55.0%)	47 (53.4%)	116 (34.6%)	246 (42.9%)
M*	29	12	40	81
Chemotherapy				
No	66 (36.7%)	34 (34.0%)	187 (50.0%)	287 (43.9%)
Yes	114 (63.3%)	66 (66.0%)	187 (50.0%)	367 (56.1%)
M*	0	0	1	1
Anti-Hormonal therapy				
No	121 (67.6%)	64 (64.0%)	239 (63.7%)	424 (64.8%)
Yes	58 (32.4%)	36 (36.0%)	136 (36.3%)	230 (35.2%)
M*	1	0	0	1
Radiotherapy				
No	22 (12.2%)	24 (24.0%)	11 (2.9%)	57 (8.7%)
Yes	158 (87.8%)	76 (76.0%)	364 (97.1%)	598 (91.3%)
M*	0	0	0	0

Significant differences between treatment groups are highlighted in red.

Quality of life scores. Median of the QoL scores with interquartile range between brackets. Global health status and significantly differing calculated scores are shown in table 2:

	Mastectomy without reconstruction	Mastectomy with reconstruction	Breast Conserving Surgery
Global health status	66.7 (\pm 25.0)	83.3 (\pm 16.7)	75 (\pm 25.0)
Physical functioning	86.7 (\pm 20.0)	86.7 (\pm 13.3)	86.7 (\pm 20.0)
Body image (BR23)	66.7 (\pm 41.7)	75.0 (\pm 41.7)	91.7 (\pm 25.0)
Sexual functioning	83.3 (\pm 33.3)	66.7 (\pm 33.3)	66.7 (\pm 50.0)
Breast symptoms	8.3 (\pm 25.0)	8.3 (\pm 16.7)	16.7 (\pm 25.0)
Body image (BIS)	10.0 (\pm 13.0)	8.0 (\pm 11.0)	5.0 (\pm 8.0)

Higher QoL scores mean a better outcome, with exception of the Body image score (BIS) where lower scores mean a better body image. Higher symptom scores mean a higher degree of symptoms.

Conclusion

In our study, mastectomy with reconstruction patients showed the best global health status scores outperforming both BCS and mastectomy without reconstruction patients. Differences were not large and not statistically significant in univariate analysis. We confirmed the impact of type of breast cancer surgery on body image. Using validated questionnaires and excluding patients with a short interval after surgery, we found that body image in the BCS group was significantly better compared to the two mastectomy groups. There is a small benefit of reconstruction after mastectomy, which was not significant. In early breast cancer, pre-operative multidisciplinary counselling seems necessary, explaining possible implications of each surgical treatment choice.