

Comparison of Breast Conservation Procedure with Modified Radical Mastectomy in Treatment of Breast Cancer

Dae Dong Kim, M.D., Chang Yong Sohn, M.D.,
Jin Hee Kim, M.D.*, You Sah Kim, M.D.

Departments of Surgery and Therapeutic Radiology,
Keimyung University School of Medicine, Taegu, Korea*

Abstract : Modern prospective studies have demonstrated that breast conservation procedure (BCP) and modified radical mastectomy (MRM) produce comparable actuarial survival rates. This study was designed to evaluate the merit of BCP in the treatment of breast cancer. 134 patients underwent BCP during the period of Aug. 1987 to Aug. 2000 (BCP group), and they were compared with patients who underwent MRM during the same period (MRM group). Tumor size, lymph node status and age were similar between the two groups. The clinicopathologic features, locoregional recurrence, distant metastasis, actuarial overall survival rate and disease-free survival rate were analyzed. The mean age of the BCP group was 44.6 yrs, and that of the MRM group was 44.8 yrs. The mean size of tumor was 1.89 cm in the BCP group and 1.92 cm in the MRM group. Among the 134 patients in the BCP group, no lymph node metastasis was observed in 92 (68.7%), 1-3 lymph node(s) in 26 (19.4%), and more than 4 lymph nodes in 16 (11.9%). In the MRM group, the numbers were the same. In the BCP group, the actuarial 5-yr overall survival rate was 88.20% and the 5-yr disease-free survival rate was 84.2%. For the MRM group, the actuarial 5-yr overall survival rate was 85.7% and 5-yr disease-free survival rate was 80.4%, showing no significant difference between two groups. Thirteen in the 134 BCP group and five in the 134 MRM group had locoregional recurrences and five in the 134 BCP group and 17 in

the 134 MRM group had distant metastases. The above results suggest that BCP can be a standard surgical treatment modality for most patients with early stage breast cancer.

Key Words: Breast cancer, Breast conservation therapy, Survival rate

가 [7].

1993 가
 12.1%, 1997 가 [1], 13.3%, 1999 가, 14.7% 가
 가 1996 3,801 가
 1997 4,168 가 [2].
 가 가

가

1867 Moore
 1894 William S. Halsted
 [3]. 1948 Patey
 Dyson 1987 8 2000 8
 ()
 + +
) 134
 (breast conservation procedure)
 (modified radical mastec-
 tomy) 808
 가 (± 2)
 (0, 1-3, 4),
 가 (± 0.2 cm)

[5-6]. 1991 NIH
 “ 1 2

Table 1
6 MV

Table 1. Patients characteristics in BCP group and MRM group

	BCP group No. (%)	MRM group No. (%)	P-value
Age (yr)			
<29	8 (6.0)	7 (5.2)	
30 - 39	34 (25.4)	36 (26.9)	
40 - 49	54 (40.3)	49 (36.6)	
50 - 59	26 (19.4)	30 (22.4)	
60 <	12 (9.0)	12 (9.0)	
mean (\pm SD)	44.57 \pm 10.50	44.80 \pm 10.16	0.086
Tumor size (cm)			
< 1.0	12 (9.0)	5 (3.7)	
1.0 - 2.0	56 (41.8)	62 (46.3)	
2.1 - 3.0	53 (39.6)	52 (38.8)	
3.0 <	13 (9.7)	15 (11.2)	
mean (\pm SD)	1.89 \pm 0.84	1.92 \pm 0.84	0.745
Lymph node metastasis			
Negative	92 (68.7)	92 (68.7)	0.218
Positive	42 (31.3)	42 (31.3)	
1 - 3	26 (19.4)	26 (19.4)	
4 <	16 (11.9)	16 (11.9)	

BCP, breast conservation procedure; MRM, modified radical mastectomy.

X- 180 cGy, 2.
5 5040 cGy (tumor
bed) 9 MeV 12 MeV 가
200 cGy 1000 cGy 1
2 mm
가 1600 cGy
가 4 35
3 가
6 MV X- 4,500-5,000 cGy
5 1 3.

Chi-square test independent samples

t-test
Kaplan-Meier test ,
rank test .

5 mm
가 123 (91.8%) 5-3 mm가 4
(3.0%), 3 mm 가 5 (3.7%)
2 (1.5%)
5 88.2%,
85.7%
가 (Fig. 1). 5
84.2%, 80.4%
(Fig. 2).
18 (13.4%)
13 (9.7%) 가 5
(3.7%)
22(16.4%) 5 (3.7%)
, 17 (12.7%)
가
3

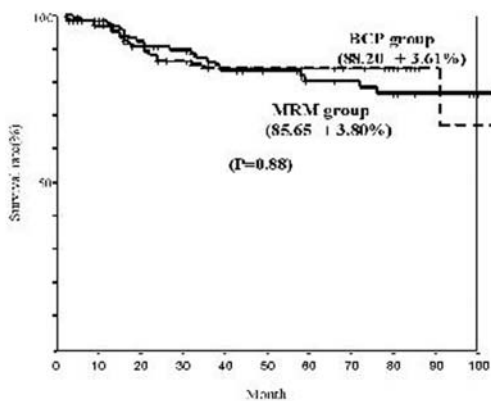


Fig. 1. The comparison of overall 5-year survival rate between breast conservation procedure (BCP) and modified radical mastectomy (MRM groups).

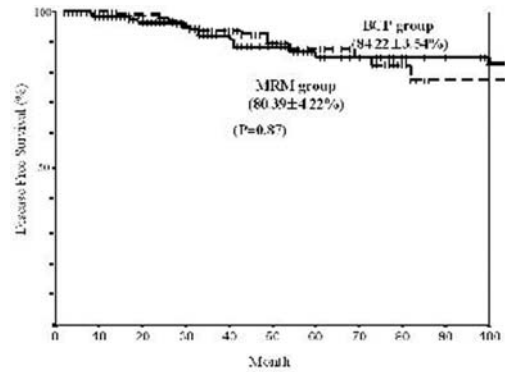


Fig. 2. The comparison of 5-year disease free survival between breast conservation procedure (BCP) and modified radical mastectomy (MRM groups).

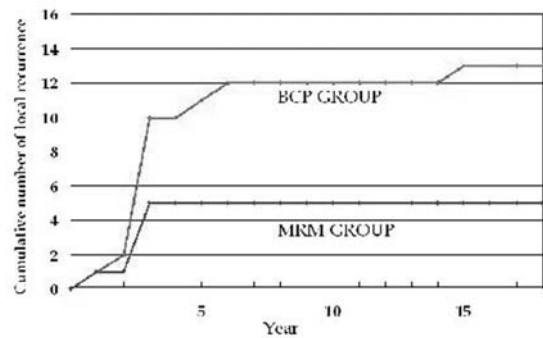


Fig. 3. The comparison of local recurrence between breast conservation procedure (BCP) and modified radical mastectomy (MRM groups).

8 , 10 가
2
가 (Fig. 3).
2
2 3 , 4 , 6 , 8
(Fig. 4).
46.0 (2 - 122),
57.5 (4 - 239)
22.4 ± 18.99 ,
33.0 ± 28.69

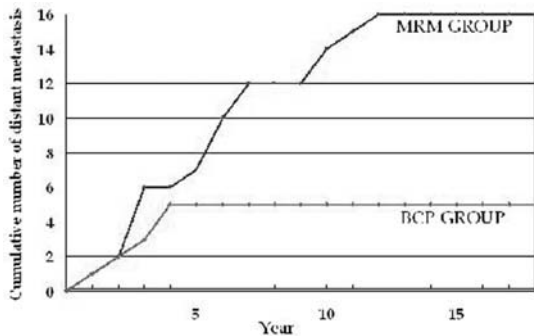


Fig. 4. The comparison of distant metastasis between breast conservation procedure (BCP) and modified radical mastectomy (MRM groups).

가 1 , 가 3
 가 ,
 60.6 , 67.6
 30.2 ,
 94.3
 (2)
 41.5 , (1) 62.0
 가

1 5
 91.3%,
 93.0% 가 . 5
 84.7%,
 86.0% 70 8
 (11.4%) 7
 (10.0%) 가 1 (1.4%)
 9 (13.4%) 가 67
 . 2 5
 91.8%, 84.1%
 가 . 5
 91.9%,
 75.9%
 55 4 (7.3%)
 1 (1.8%)
 가 3 (5.5%)
 57 14 (24.6%)
 5 (8.8%) , 9
 (15.8%) . 3
 9 5 (7.3%)
 4 (1.8%)
 가 1 (5.5%)
 10 4 (24.6%)

2000
 가
 가 가
 가
 76.8%가
 50 [9]. ' 1998
 '[10]
 40 (37.9%) , 50 (24.5%), 30
 (20.0%)
 [11] 40
 (32.4%) , 30 (30.3%), 50
 (18.9%)
 2.0
 cm 38.2%, 2.0-5.0 cm가 61.1%
 40.5%
 가 3 cm
 1.89 ± 0.84 cm
 31.3%

1970 Fisher [12] 91.8%, 84.1%, 5
60 - 80% 75.9% 91.9%,
가 . Jacobson 10 Mansfield [18]
77%, 1 5 97%, 5
75% 10 93%, 2
72%, 5 87%, 5 92%
69% 가 .
[13]. [11] 가 , 가
94.9% 5 87.6% 가
5 88.2% .
84.2% 67% 60
[11] 87.6% 5 80
82-83.7%,
13.4%, 3-10.5% [19].
16.4% 70 80
[14] 14% 5% '1998
[15] Fisher [10] 23.8%
8 -10 가 .
Edinburgh [20]
4-20%, 25-31%
2-9% 1 2 77%
9.7%, . Henson , 가
3.7% 가 .
Ries[16] 가 5-10% , 가
3.7% , 가
3 가 , 8 , 10 가 ,
가 가 (collagen vascular disease)
2 가 가
가 . 가
15 가 [21]
3-5 가 .
Dalberg [17] , 가
1 5 ,
91.3%, .
93.0%, 5
84.7%, 86.0%
2 5

[15,22].

5

가

[12,23]. Fisher [24]

5

, 5

10.5% 2.9%
10.4% 7.5%

[25].

20-40%

[26]

가

가

)

가

1987 8 2000 8

134

134

5

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