

Ther a-Band

1.

가

1800

가

가

(Kirstein, Dietz, & Hwang, 1991; McNeal, 1990).

가

가

(Ekblim, Lovgren, Alderin, Fridstrom, & Satterstrom, 1975; Harkcom, Filey, Lampman,

Banwell, & Castor, 1985; Karper & Evans, 1986; Nordemar, Edstrom, & Ekblom, 1976),
가
(Danneskiold-Samsoe, Lyngberg, Risum, Telling, 1987; Minor, Dreisinger, Webel, Smith, & Kay, 1985; , 1994), 가
(, 1997; Haekkinen, Haekkinen, & Hannonen, 1994; Rall, Meydani, Kehayias, Dawson-Hughes, & Roubenoff, 1996)

Thera-Band

4.

가

1)

Thera-Band

2)

3

가

Thera-

Band

가

“rheumatoid cachexia”

가

2. 가

interleukin-1 beta

tumor necrosis factor

가, 가

16

Thera -Band

가

1)

가

가

2)

가

(Roubenoff , 1992).

3)

가

4)

가

(4-1)

가

가

가

(4-2)

C-

가

(Harkcom , 1985).

3.

1)

(, 1994 ; , 1997 ; Haekkinen , 1994 ; Rall , 1996 ; Minor , 1985 ; Nordemar, Ekblom, Zachrisson, & Lundqvist, 1981).

가 C-

2)

30

가 Byers(1985) (1997) 5 8

가 가 Harkcom (1985) 12 가

3 , 15 , 25 , 35 C-

가 35 C-

3 15

가 Rall (1996) 12 가

가 1.

가 50 16

C- 가 Thera-Band

가

47 2.

Tai-Chi 1 10 D

Kirsteins (1991) Tai-Chi

class 1,2 16

(1994) 6

가

가 Cohen 17

(1995) 6 가 15

14

6

3.

Fries,

Spitz, Guy, & Holman(1986)

1)

(1996)가 , Health Assessment
Questionnaire (HAQ)

16 30

26 4

Thera-Band
(Stenstrom, 1994) 3

26 104 가

, , 8

. Thera-Band 6 C-

가 , , 가

, , 4.

2000 1 8 6 30

3가

Thera-Band

1 3

1

2000 1 8 1 30 D
가

2

1 가 , ,

2)

2000 2 8

(1987)

0 15 1

3가 Thera-Band

가

30

3

1 4

0 15 가 2

가

가

4

가 Thera-Band

ESR CRP

6.

SPSS Windows

가

2.

1)

Chi-square test Mann -Whitney test

50%

78.6%가

2)

Thera-Band

64.3%가

, 35.7%

1-2

Mann- Whitney test

가

71.4%가

< 2>

1.

Chi-square test

Mann-Whitney test

< 1>

56.71 ,

57.57 ,

7.71 ,

10.57

2. 가

1) 1가

“

가

”

가

가

Mann-Whitney test

< 3>

< 1>

	()	()	U or ²	p
	56.71 ± 4.07	57.57 ± 5.79	82.00	.482
	155.64 ± 5.73	154.00 ± 4.37	84.50	.541
	55.57 ± 7.93	51.93 ± 8.15	74.00	.285
	7.71 ± 6.47	10.57 ± 10.69	79.00	.401
	5.43 ± 2.24	3.86 ± 1.99	56.00	.056
	5.79 ± 1.85	3.86 ± 2.38	49.00	.024*
	78.57 ± 18.77	96.57 ± 8.66	35.00	.003**
ESR	27.21 ± 22.39	31.64 ± 24.71	83.00	.511
CRP	11.21 ± 8.44	17.86 ± 22.84	89.00	.701

2.24 가 5.43±
 2.50±2.03
 3.86±1.99
 3.71±2.09
 가 (U=6.50 p<.001).
 17가

< 3>

	()	()	U	P
14	5.43 ± 2.24	2.50 ± 2.03	-2.93	6.50 .000**
14	3.86 ± 1.99	3.71 ± 2.09	-0.15	

2) 2가
 “ 가
 ”
 Mann-Whitney test < 4>
 가 5.79±1.85
 3.00±2.39
 , 3.86±2.38
 3.71±3.02

p<.01). 2가 가 (U=26.5

< 4>

	()	()	U	P
14	5.79 ± 1.85	3.00 ± 2.39	-2.79	26.50 .001
14	3.86 ± 2.38	3.71 ± 3.02	-0.15	

3) 3가
 “ 가
 ”
 가 78.57±18.87
 97.00±10.30
 96.57±8.66 97.79±9.71

< 5>

	()	()	U	P
14	78.57 ± 18.77	97.00 ± 10.30	18.43	22.50 .000**
14	96.57 ± 8.66	97.79 ± 9.71	1.22	

가 (U=22.5
 p<.001). 3가 < 5>.

4) 4가
 “ 가

Mann-Whitney test < 6>

27.21±22.39 23.07±26.39 ,
 31.64±24.71 18.64±
 26.10

(U=79.5 p>.05). 4-1가

< 6>

	()	()	U	P
14	27.21 ± 22.39	23.07 ± 26.39	-4.14	79.5 .401
14	31.64 ± 24.71	18.64 ± 26.10	-13.00	

“ C-
 ” < 7>

C- 11.21±8.44
 15.64±21.43 ,
 17.86±22.84 15.00±15.25
 C-

가 (U=83.00, p>.05). 4-2가

< 7 >

C-

	()	()	U	P
14	11.21 ± 8.44	15.64 ± 21.43	4.43	83.0 .511
14	17.86 ± 22.84	15.00 ± 15.25	-2.86	

V.

16

Thera-Band

가

가

50%가

64.3%가

35.7%

1-2

30

35

Harkcom (1985)

15, 25,

12

가

Stenstrom(1994)

6

Haekkinen (1994)

12

가
Keiser

가 Rall (1996)

(1985)

Harkcom

가

가

가

Rall (1996)

가

18.43

1.22

8

(1997)

가

(Bostroem, Harms-Ringdahl, & Nordemar, 1995; Hawley & Wolfe, 1991; Hansen, T., Hansen, G., Langgaard, Rasmussen, 1993; Rall, 1996; Semble, 1995).

가

(, 1994)

C-

5 6

Nordemar (1976)

8

C-

(1997)

가

가

(, 1994; Haekkinen, Hannonen, & Haekkinen, 1995)

C-

가

가 C- 16 1. Thera-Band 가

2.

Thera-Band 가

3. Thera-Band 가

(1994). _____

16 Thera-Band

_____, _____.

가

, (1995).

8 6 30 2000 1 D 14 , 14 30

_____, 2(2), 131-146. (1997). _____ 가

2 , 3 , 16

(1987).

_____, 2(1), 27-40.

(1996).

_____, 5(1), 63-89.

1. Bostroem, C., Harms-Ringdahl, K., & Nordemar, R. (1995). Relationship between measurements of impairment, disability, pain, and disease activity in rheumatoid arthritis patients with shoulder problems. Scandinavian Journal of Rheumatology, 24, 352-359.
2. 가
3. 가
4. 가 C- 16 Thera-Band Danneskiold-Samsoe, B., Lyngberg, K., Risum, T., & Telling, M. (1987). The effect of

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- Abstract -

Key concept : Brisk walking & muscle
Strengthening exercise, Pain,
Fatigue, Physical function,
Disease activity

Effects of Brisk Walking & Muscle Strengthening Exercise Using Thera-band on Pain, Fatigue, Physical Function, and Disease Activity in Patients with Rheumatoid Arthritis

*Lee, Eun Nam **

The effects of brisk walking & muscle strengthening exercise on pain, fatigue, physical function & disease activity were examined in 28 patients with rheumatoid arthritis. Research design was a quasi-experimental study of non-equivalent control group pretest-posttest design.

14 for the experimental group and 14 for the control group were selected from the outpatients on rheumatoid arthritis clinic of Dong-A University Hospital. The experimental group

underwent 16 weeks of brisk walking and muscle strengthening exercise using Thera-Band. Pain, fatigue, physical function & disease activity was measured before and after 16 weeks of exercise.

At baseline test, Fatigue & physical function score between groups were significantly different. So differences within experimental group (baseline versus follow up) were compared with differences within the control group by Mann-Whitney test.

There were significant differences between groups in the difference score on pain ($U=6.50$ $p<.001$) and fatigue ($U=26.5$ $p<.01$). For the experimental group, the score on the pain & fatigue was significantly decreased but no changed for the control group.

Also there was a significant differences between groups in the difference score of the physical function ($U=22.5$ $p<.001$). For the experimental group, the score of the physical function has been significantly increased. However, for the control group, it has been no changed. But there were no significant differences between groups in the ESR (erythrocyte sedimentation rate) and the CRP (C-reactive protein) level.

In summary, brisk walking & muscle strengthening exercise led to significant improvements in pain, fatigue, and physical function without exacerbating disease activity in patients with rheumatoid arthritis.

* Assistant professor, department of nursing, Dong-A University