



Comparison of Effectiveness Between CDT and SGB In Breast Cancer Related Lymphedema Patients



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ABSTRACT

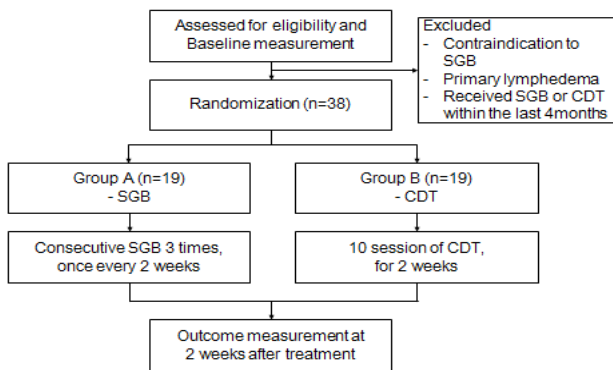
- Lymphedema is a progressive pathologic condition of localized body fluid retention caused by a compromised lymphatic system.
- This kind of secondary lymphedema usually occurs after breast cancer treatments.
- The standard treatment for lymphedema is complex decongestive physiotherapy (CDT), but it is sometimes criticized for being time consuming and can be a burden for the rest of the patient's life.
- Recently, previous studies tried the cervical stellate ganglion block (SGB) and reported a good result for the reduction of lymphedema, but these trials are limited.
- Therefore, a comparison between CDT and SGB is needed to determine whether SGB can be applied as much as CDT in the clinic.

METHODS

Design

- A prospective randomized controlled study

Figure 1. Participant flow diagram.



Treatments

- SGB group (n = 19)
 - Consecutive SGB 3 times, once every 2 weeks at the outpatient clinic
 - Procedure
 - Supine position with SONO guidance
 - 4ml of 1% lidocaine and 1ml of 40mg triamcinolone mixture
- CDT group (n= 19)
 - Ten sessions of CDT (2 weeks) with a physical therapist in the outpatient clinic
 - One session (40 min) was comprised of manual lymphatic drainage (15 min), bandaging (15 min), and exercise (10 min)

Outcomes

- Primary outcomes
 - Side to side difference of circumference, bioimpedance and volume
- Secondary outcomes
 - Quality of life assessed by EQ-5D and EQ VAS

Statistics

- To compare patients characteristics between groups, the Kruskal-Wallis test and Fisher's exact test was performed.
- To compare the outcomes at 2 weeks after treatment from baseline, the Wilcoxon signed-rank test was performed.
- To compare the two groups, changes of each parameters between baseline and 2 weeks after treatments were tested by Mann-Whitney U-test.

RESULTS

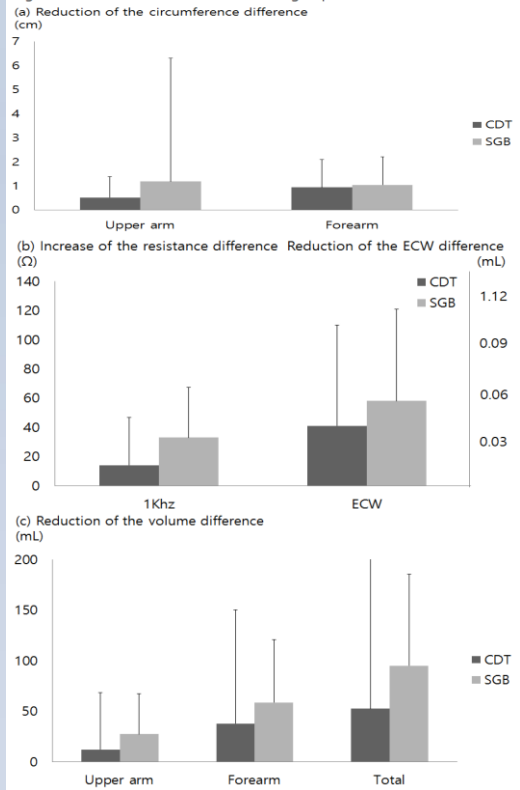
- The demographic information showed an even distribution between the SGB and CDT groups, including age, time since surgery, cancer treatments and the baseline parameters.

Table 1. Side-to-side difference of each parameters

	Baseline	After treatment	p-value
CDT			
Circumference (cm)			
Upper arm	3.09±1.97	2.57±1.82	* 0.017
Forearm	3.88±2.40	2.94±2.15	* 0.002
Bioimpedance			
1Khz (Ω)	92.35±48.70	78.32±54.91	0.079
ECW (mL)	0.204 ±0.163	0.163±0.129	* 0.028
Volume (mL)			
Upper arm	146.11±102.24	134.05±86.49	0.362
Forearm	271.05±192.46	233.32±159.43	0.162
Total	417.16±285.52	364.63±239.10	0.139
SGB			
Circumference (cm)			
Upper arm	3.45±5.13	2.27±1.94	0.329
Forearm	3.20±2.01	2.16±2.10	* 0.001
Bioimpedance			
1Khz (Ω)	87.17±44.89	54.15±47.85	* 0.001
ECW (mL)	0.163±0.155	0.104±0.133	* 0.001
Volume (mL)			
Upper arm	131.95±90.24	104.47±74.31	* 0.008
Forearm	222.79±155.17	164.21±162.61	* 0.001
Total	353.05±226.03	258.05±231.21	* <0.001

- The improvement of side to side difference of each parameters was shown in Table 1. The circumference of the forearm in CDT and SGB, bioimpedance and volume in SGB showed a significant improvement in each.

Figure 1. The effect of treatment between groups



- The therapeutic results after each treatment were shown in Figure 1. Both CDT and SGB resulted in a reduction of circumference and volume difference, which is not a significant difference between the two groups.
- EQ-5D and EQ VAS for assessing the quality of life showed no significant difference between two groups after treatment.

CONCLUSIONS

The results of the present study show that SGB is an effective treatment in breast cancer-related lymphedema patients. SGB might be an alternative treatment for lymphedema after further studies are followed.

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