

Manual Lymph Drainage Combined With Compression Therapy for Arm Lymphedema Following Breast Cancer Treatment

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Summary and Conclusions

TECHNOLOGY AND TARGET GROUP Arm lymphedema is a common complication following breast cancer treatment. The condition increases arm volume, causes a sensation of heaviness and tightness, and in some patients it may cause pain and impair mobility. Over time, the increase in fat volume results in tissue changes, making lymphedema increasingly difficult to treat. Treatment should be started during the phase when patients experience a sensation of tightness, increased tissue consistency, and a minor increase in arm volume. The greatest risk for developing arm lymphedema (40–75 percent) is found in patients who have undergone procedures to remove lymph nodes in the armpit and have received radiation therapy in this area. Primarily, it is this group that should be followed up regularly for early detection of lymphedema. Compression has been found to yield good effects, and comprises standard treatment for lymphedema. Compression can be achieved by using an elastic sleeve or by bandaging. To further enhance the effects of treatment, some attempts have been made to combine compression therapy with manual lymph drainage, i.e., a type of gentle massage of the skin intended to stimulate lymph flow. A rough estimate is that approximately 800 new cases of lymphedema following breast cancer treatment are detected annually in Sweden. Approximately 4 000 to 6 000 people in Sweden are estimated to have this diagnosis.

PRIMARY QUESTION In treating arm lymphedema, to what extent does manual lymph drainage combined with compression following breast cancer treatment yield better results than compression therapy alone?

PATIENT BENEFIT Three relatively small randomized controlled trials (RCT) have studied manual lymph drainage combined with compression treatment for arm lymphedema. In each of these studies, edema volume and symptoms decreased in both the study and control groups. Two of the studies, in followup directly after they ended, showed statistically significant differences in the reduction of edema and symptom that favored the group on combined treatment with manual lymph drainage. The third study, however, did not show a statistically significant difference between the groups, neither in reduced edema nor in reduced symptoms. Furthermore, the results from several case studies (including over 400 patients) clearly

show that treatment with compression bandaging and manual lymph drainage had a volume-reducing effect. The design of these studies, however, does not offer the possibility to investigate the extent to which combined treatment with manual lymph drainage contributed to the reduction in lymphedema.

A few patients with various types of tissue-related pain may find it difficult to tolerate the discomfort associated with compression therapy. Combined treatment with manual lymph drainage has not been shown to cause additional complications.

ECONOMIC ASPECTS The extra cost of adding manual lymph drainage is estimated at approximately 4 000 Swedish kronor (SEK) per treatment cycle, i.e., on average 5 to 10 treatments during 1 to 2 weeks. No studies were identified that addressed the cost effectiveness of combined therapy for arm lymphedema.

SBU's appraisal of the evidence

Some evidence suggests that treatment involving a combination of compression therapy and manual lymph drainage yields reduced edema volume compared to compression therapy alone if volume is measured directly after the conclusion of manual lymph drainage (Evidence grade 3)*. There is no evidence to show that this effect is permanent. Further randomized controlled trials of sufficient size should be conducted – where treatment effects could be studied more closely in both the short and long term – before a combination of compression therapy and manual lymph drainage can be recommended. Future studies should give particular consideration to the magnitude of lymphedema since some studies suggest that early treatment for minor lymphedema may have greater effects and permanent results. Furthermore, the costs for combined therapy should be calculated and studied in relation to the potential health benefits for patients.

**Grading of the level of scientific evidence for conclusions.
The grading scale includes four levels;
Evidence grade 1 = strong scientific evidence,
Evidence grade 2 = moderately strong scientific evidence,
Evidence grade 3 = limited scientific evidence,
Evidence grade 4 = insufficient scientific evidence.*

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The complete report is available only in Swedish.