

Prophylactic compression after breast cancer surgery

Katarzyna Ochalek,^{1,2} Hugo Partsch,³
Zbigniew Szygula⁴

¹Department of Clinical Rehabilitation, Faculty of Motor Rehabilitation, University of Physical Education, Krakow, Poland; ²Lymphedema Clinic, Krakow, Poland; ³Medical University of Vienna, Vienna, Austria; ⁴Department of Sports Medicine and Human Nutrition, Faculty of Physical Education and Sport, University of Physical Education, Krakow, Poland

Introduction

Breast Cancer - Related Lymphedema (BCRL) remains one of major long-term complications of oncological treatment. Axillary lymph node dissection, sentinel lymph node biopsy and radiotherapy are associated with development of BCRL by damage of the distribution or function in the lymphatic system of the axilla.¹⁻³ Despite different attempts, scientific evidence concerning prevention of BCRL remains still poor.^{4,5} In a previous randomized controlled trial it has been demonstrated that arm compression sleeves (CG) in class 1 (ccl1, 15-21 mmHg) worn immediately after breast cancer surgery including axillary lymph-node removal in addition to physical therapy are able to reduce the occurrence of early postoperative swelling and of arm lymphedema up to one year.⁶ The available data indicated also that CG neither interfere with the level of physical activity nor decrease quality of life 1 year after breast cancer surgery.⁷

Aim of the present investigation was to check the further development of the arm swelling in patients using compression sleeves or not, and to compare the quality of life in women treated due to breast cancer two years after surgery.

Materials and Methods

From 45 patients recruited at the beginning, after two years 1 patient from CG died and 3 patients (2 from CG, 1 from NCG) resigned, finally 41 patients (20 in CG and 21 in NCG) have continued prophylactic management including circular-knit sleeves in class 1 (ccl1, 15-21 mmHg) for daily wearing with physical exercises (CG) or physical exercise without compression (NCG) in post-operative period. Compression sleeves delivered by the same factory (MEDI Bayreuth, Germany), were fitted based on the individual limb measurements and exchanged every six months.

Results

CG showed significantly lower mean affected arm volume compared to NCG ($P=0.023$) after 2 years. Three from 20 patents in the CG and 6 from 21 in NCG showed arm lymphedema, defined by an increase of the arm volume exceeding 10% compared to the preoperative values. Significant improvement of several parameters QOL (QLQ-C30 and QLQ-BR23 questionnaires) were found in the compression group.

Conclusions

Light compression sleeves worn for 2 years are not only able to reduce the incidence of early postoperative edema and of lymphedema, but also lead to a significant improvement of important quality of life parameters like physical functioning, fatigue, pain, arm and breast-symptoms and future perspectives.

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Correspondence: Katarzyna Ochalek, Department of Clinical Rehabilitation, University of Physical Education, Al. Jana Pawla II 78 PO Box: 62, 31-571 Krakow 49, Poland.

Tel.: +48604057505.

E-mail: k.ochalek@wp.pl

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