

Evaluation of the effect of fascial release on the reduction of lymph edema, efficiency and functional capabilities of the upper limb in patients after radical mastectomy.

ABSTRACT

Lymphoedema is one of the most common complications associated with breast cancer. Edema may be a consequence of surgical treatment, radiotherapy or an ongoing inflammatory event. It is also often a symptom of relapse. The incidence of secondary lymphoedema is estimated at 20-28% in women after radical mastectomy. On the other hand, in women undergoing additional radiotherapy, the incidence increases to 36-44%. Some authors also believe that the risk of lymphoedema is strongly related to constitutional predispositions. Most often it is caused by a disturbance in the transport of lymph in the lymphatic system. It can also result from improper structure and functioning of the lymphatic vessels. During the formation of edema, the circumferences on the operated side gradually enlarge, which results in reduced mobility, inflammation and pain.

Due to the lack of the possibility of causal treatment of lymphedema, conservative, comprehensive anti-edema therapy is becoming the primary method of improving the health condition of patients. This therapy includes multi-layer compression therapy, manual and pneumatic lymphatic drainage, specialized and focused on activation of the biceps muscle pump, motor improvement and positioning (limb elevation and prophylaxis against muscle contractures). The aim of the study was to assess the effect of fascial relaxation on the reduction of lymph edema and the functional capabilities of the upper limb in patients after radical mastectomy.

The study involved 40 women aged 47 to 70 years with diagnosed II^o and III^o lymphoedema (20% to 60% of the difference in volume measurement between the healthy and diseased limbs) after unilateral mastectomy. The severity of lymphoedema was assessed based on the clinical scale for the upper extremities. Due to the degree of lymphoedema (II^o and III^o), the patients were randomly divided into two groups of 20 people, differing in the therapeutic methods used. Before starting the therapy and after 4 weeks of treatment (every other day), measurements of the circumference of the upper limbs were performed and the ranges of mobility of the shoulder joint were assessed. The measurements were performed by the same person each time.

Before the examination, the grip strength and efficiency of the upper limb were also measured, and the quality of life was assessed using the DASH upper limb disability questionnaire. Subsequent control measurements were made after the completion of the four-week lymphoedema therapy. In both groups, a four-week standard Comprehensive Decontamination Therapy was carried out, which

included: manual lymphatic drainage, pneumatic massage, multi-layer bandaging, active upper limb exercises, breathing exercises, positioning (limb elevation and prophylaxis against muscle contractions), exercises to activate the muscle pump two-headed arm.

In patients in group B, the Comprehensive Decongestant Therapy was additionally extended to include the relaxation of the fascia of the greater pectoral, less pectoral and sternum-clavicular muscles. The analysis of the results showed that the fascial relaxation applied in patients after radical mastectomy in combination with standard therapy had a significant effect on the reduction of lymphoedema, the efficiency of the upper limb and selected quality of life indicators.

Key words: mastectomy, lymphoedema, comprehensive physiotherapy of lymphoedema, fascial relaxation.