Preventing skin breakdown in lymphoedema

Introduction

Lymphoedema following breast cancer treatment is characterised by an accumulation of lymph fluid in the affected limb, leading to abnormal swelling. Meticulous daily skin care forms an integral part of lymphoedema risk reduction and also prevents skin breakdown. This article examines an innovative skin care programme that aims to improve the condition of patients’ skin and prevent skin injuries.

References


Improving practice through research

In clinical practice, many breast cancer survivors do not receive any information regarding lymphoedema and risk reduction. Educational and behavioral interventions can ameliorate lymphoedema-related symptoms and promote early detection. Similarly, targeting the proinflammatory milieu on a daily basis by optimising skin condition and preventing skin injuries has the potential to reduce lymphoedema risk.

To address this important clinical need, the author’s team proposed a pilot research programme aimed at improving clinical practice. The Optimal YOU research programme, which was funded by the Avon Foundation, aims to evaluate the effectiveness of daily behavioural interventions in promoting lymph flow, optimising the condition of patients’ skin and preventing skin injuries.
THE OPTIMAL YOU PROGRAM

The goal of The Optimal YOU programme was to address the lack of information available to breast cancer survivors and to provide them with some techniques designed to promote lymph flow and prevent inflammation/infection. Specifically, the interventions sought to:

- Minimise chronic and acute proinflammatory milieu
- Incorporate skin care into daily living
- Enhance behavioral competence through step-by-step instructions
- Sustain behavioural adherence by providing relevant explanations.

Minimising chronic proinflammatory milieu

A daily frequency-specific breathing-pumping exercise was designed to promote lymph flow and reduce oxidative stress.

The behavioral instructions involve:

- Taking 10 deep breaths
- Performing a pumping exercise by elevating both arms above the heart
- Opening and closing both hands 10 times
- Finishing with 10 deep breaths
- The breathing-pumping exercises should be performed at least three times a day – morning, noon and before bed.

Rationale – the goal for the breathing-pumping exercise is to promote lymph flow on a daily basis, thus the three-times-a-day frequency is very important. Deep breathing stimulates the lymphatic system, promotes lymph flow, and relaxes the body to decrease oxidative stress and as a result, minimise chronic proinflammatory milieu.

Minimising acute proinflammatory milieu

Skin care strategies for the prevention and care of skin injuries were designed to prevent acute infection and minimise acute proinflammatory milieu.

Preventive behaviors to prevent skin injuries involve:

- Wearing protective gloves while gardening or doing household chores (washing dishes, cleaning or cooking)
- Wearing long-sleeve clothes or apply sunscreen to prevent sunburn
- Applying insect repellent or wear an insect-repellent band to prevent insect bites
- Cuticles should be pushed back and kept moist, but never cut

Page points

1. Skin care strategies that prevent injury are designed to prevent acute infection
2. The risk of inflammation and infection is increased if the skin integrity is compromised
3. Daily skin care can optimise patients’ skin condition by maintaining hygiene and keeping the skin moisturised
4. Dry skin is more likely to breakdown allowing bacteria to penetrate the protective skin barrier
5. Water-based moisturisers are absorbed more readily by the skin and low pH moisturisers provide an active barrier against infection

References

Practice development

Page points
1. Pre and post programme tests demonstrated that the majority of participants have an increased knowledge of their condition
2. The programme has made it easier for breast cancer survivors to adhere to self-treatment behaviours on a daily basis
3. The programme has meant that the subject of lymphoedema is no longer avoided in the author’s Institute

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References

OPTIMAL YOU PROGRAMME

EVALUATION OF THE
OVER 85% OF ELIGIBLE WOMEN WITH A BREAST CANCER DIAGNOSIS AT THE AUTHOR’S INSTITUTE HAVE PARTICIPATED IN THE PROGRAMME. PRE AND POST-COGNITIVE KNOWLEDGE TESTS HAVE REVEALED THAT PARTICIPANTS HAVE INCREASED THEIR KNOWLEDGE OF LYMPHOEDEMA AND RISK-REDUCTION. PARTICIPANTS HAVE REPORTED 98–100% BEHAVIORAL ADHERENCE AND OVERALL THERE WAS A VIEW THAT KNOWING WHY, WHEN, AND HOW TO IMPLEMENT THE RISK-REDUCTION BEHAVIORS MADE IT EASIER TO MAINTAIN THEM ON A DAILY BASIS. LIMB-VOLUME HAS BEEN MAINTAINED AND NO CELLULITIS AND INFECTIONS HAVE BEEN REPORTED. THE AUTHOR’S TEAM WILL REPORT ON THE FINAL 12-MONTH FOLLOW-UP FINDINGS IN 2011.

LYMPHOEDEMA IS NO LONGER A TABOO AT THE INSTITUTE. SURGEONS, ONCOLOGISTS, RADIOL O GISTS, AND NURSES ARE WILLING TO DISCUSS LYMPHOEDEMA AND RISK-REDUCTION. WITH MORE RESEARCH, THE TEAM IS CONFIDENT THAT CLINICAL PRACTICE WILL BE CHANGED AND CLINICAL OUTCOMES WILL BE IMPROVED, ESPECIALLY REGARDING BREAST CANCER SURVIVORS’ SYMPTOM EXPERIENCE AND QUALITY OF LIFE AS WELL AS THE COST-EFFECTIVENESS OF MANAGEMENT FOR THE HEALTHCARE SERVICE.

CONCLUSION
LYMPHOEDEMA IS A MAJOR PROBLEM FOR THOUSANDS OF BREAST CANCER SURVIVORS. A LOWER QUALITY OF LIFE IS OBSERVED IN BREAST CANCER SURVIVORS WHO GO ONTO DEVELOP LYMPHOEDEMA THAN IN THOSE WHO DO NOT. IN CLINICAL PRACTICE, MANY BREAST CANCER SURVIVORS DO NOT RECEIVE ANY INFORMATION REGARDING LYMPHOEDEMA AND RISK REDUCTION AND TO ADDRESS THIS, THE AUTHOR’S TEAM PROPOSED A PILOT RESEARCH PROGRAMME AIMED AT IMPROVING CLINICAL PRACTICE.

THE GOAL OF THE PROGRAMME WAS TO PROVIDE PATIENTS WITH TECHNIQUES DESIGNED TO PROMOTE LYMPH FLOW AND PREVENT INFLAMMATION/INFECTION. THIS INCLUDED PROVIDING PATIENTS WITH TECHNIQUES TO MINIMISE CHRONIC AND ACUTE PROINFLAMMATORY MI ELI EU, INCORPORATE SKIN CARE INTO DAILY LIVING, ENHANCE BEHAVIORAL COMPETENCE AND SUSTAIN BEHAVIORAL ADHERENCE.

SO FAR THE PROGRAMME HAS BEEN A SUCCESS, WITH PATIENTS NOT ONLY BECOMING USED TO PERFORMING RISK-REDUCTION BEHAVIOURS, BUT ALSO ADHERING TO THEM. A 12-MONTH REVIEW WILL REPORT ON THE TRUE EFFICACY OF THE PROGRAMME.

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