

THE USE OF COMPRESSION BELT IN THE PREVENTION OF SEROMA FORMATION POST-BREAST CANCER SURGERY: A RANDOMIZED TRIAL

Nagalingam S², DHARMAWAN RENA¹, Tay Luke¹, Wong CY¹, Tan B¹

¹Department of General Surgery, Singapore General Hospital, Outram Road, Singapore 169608

²Nursing Division, Singapore General Hospital, Singapore

Background

Seroma formation is a common complication after breast cancer surgery. The incidence of symptomatic seroma formation has been reported as high as 90% and these patients require multiple clinic visits for serial aspirations representing morbidity, lost productivity and increased cost to the patient and healthcare system. Numerous management strategies have been proposed but few have demonstrated practical efficacy in reducing the incidence. This study aims to evaluate the effectiveness of compression belt in reducing the incidence and severity of seroma among patients post-breast cancer surgery.

Methodology

This is a single-centre prospective randomized-controlled trial of 82 patients who underwent simple mastectomy or wide local excision and/or axillary clearance between January to July 2012 by oncologic breast surgeons. A low-pressure suction surgical drain (Medivac) was placed intra-operatively in all patients and removed when drainage volume was less than 30mL/day. Forty-one patients were randomized into the treatment arm with a commercially-available compression belt applied and 38 into the control group. Patients with symptomatic seromas after drain removal underwent manual aspirations in clinic. The frequency and volume of aspiration, and total treatment duration were recorded.

Results

There was a significant reduction in the incidence of seroma formation in the treatment group (39.5% vs 64.3%, $p=0.0231$). The difference in number of aspirations and average volume aspirated per breast for those who developed seroma in the two groups, was not significant (2.0 aspirations and 215 mL aspirated per breast in treatment group vs 2.1 aspirations and 166 mL per breast in control group).

Conclusion

Our study showed a 24% reduction in seroma formation post-breast cancer surgery with the use of a compression belt. These results are encouraging, and represent the first study to demonstrate a reduction in seroma formation using a compression garment, based on existing literature.