A call for continued global collaboration and research for the prevention of breast cancer related arm lymphoedema

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We thank Hayes and colleagues for their comments on the Multinational Association in Supportive Care in Cancer (MASCC) clinical practical guidance for the prevention of breast cancer-related arm lymphoedema (BCRAL).[1] Such fruitful discussions strengthen our ongoing efforts to advance the use of evidence-based solutions for the prevention and management of this complex condition.

The main focus of our Delphi consensus study was to support clinicians to navigate the most updated, high-level evidence on the prevention of BCRAL. Specifically, we aimed to seek expert consensus regarding prospective surveillance programs, prophylactic compression sleeves, axillary radiotherapy in patients with a positive sentinel lymph node biopsy and advanced surgical techniques, which were not explored in detail in existing lymphoedema guidelines.[2,3] Our clinical practice guidance extends beyond previous work by providing practical considerations for implementing these interventions. We recognize that there are complex interactions between different risk factors at play that drive the development of BCRAL. However, offering preventative interventions to all breast cancer survivors is likely impossible and could place significant physical and psychological burden to low-risk patients. Therefore, before further validation of risk scores that could accurately predict the risk of BCARL, the list of risk factors prioritised by our international expert panel could help healthcare professionals in resource-constrained settings to stratify which patients should be prioritised for these interventions.

We agree with Hayes and colleagues that patient education on BCRAL is critical in clinical practice. However, a recent RCT showed that a comprehensive knowledge transfer program did not reduce the incidence of BCRAL at 18 weeks after surgery.[4] Although it is possible that a significant difference could be observed with a longer follow-up, there is a suggestion that additional interventions may be required to enhance the effectiveness of education programs in preventing BCRAL in the early postoperative period. Our group is currently leading a systematic review to identify the emerging self-management and home-based interventions (PROSPERO ID: CRD42023478784) that can potentially be helpful for patients. We also plan to update this guidance regularly to reflect the latest evidence.

The RCT of Paramanandam et al. is the first study to date that evaluated the role of prophylactic compression sleeves in the prevention of BCRAL.[5] Like all interventions, continual evaluation is crucial to establish whether prophylactic sleeves can be recommended as a standard of care for all patients. Hayes and colleagues have raised important directions that future investigators should explore. We support efforts to conduct additional clinical trials to study the psychological impact of prophylactic compressive sleeves, and whether modification of the sleeves can further enhance the efficacy with less discomfort to patients. Nevertheless, as some patients may develop BCRAL as early as six months after surgery[6] and will find prophylactic compression sleeves helpful.[5] Patients should be provided with self-management education, and be instructed to return to their healthcare team if there are any problems or concerns with their sleeves.

While exercise programs are efficacious for the overall well-being and quality of life of breast cancer survivors,[7,8] the systematic review by Hayes et al. reported inconclusive evidence that exercise programs are effective for reducing the incidence of BCRAL.[9] The meta-analysis indicated there was no overall difference, except for one subgroup, in the risk of developing BCRAL between the exercise and control groups (Risk ratio [RR], 0.90; 95% CI, 0.72–1.13).[9] Furthermore, there were many types of exercise interventions explored in the literature. For instance, the intensity of the exercise programs ranged from low to high, and the duration varied from eight weeks

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to 18 months.[9] We believe it would be challenging for the expert panel to give detailed, practical recommendations based on the heterogeneity of the evidence. Our group supports further effectiveness and hybrid effectiveness-implementation trials on exercise programs for the prevention of BCRAL. These interventions could be potentially cost-effective and more widely implemented if they can be primarily performed at home with minimal equipment.

The clinical presentation and epidemiology of BCRAL will continue to evolve with advances in oncological treatments and the implementation of interventions to prevent and manage it. International and multidisciplinary collaboration will be important to meaningful advances in the understanding of the pathophysiology of BCRAL and the development of innovative strategies to address it. In addition, we call for studies that will generate knowledge on resource considerations across various international settings. Consistent with the Supportive Care 2030 Movement led by MASCC,[10] we encourage the incorporation of resource stratifications in future clinical guidelines. The MASCC Oncodermatology and Survivorship Study Groups will continue to provide a collaborative platform for future BCARL research. We welcome all interested healthcare professionals, researchers, administrators and patient advocates to join forces in this global effort to ensure breast cancer survivors receive evidence-based and patient-centred care for BCRAL.

Contributors

All authors (HCYW, MW, AWC, EC, RJC) contributed to the writing, editing, and approval of the final article.

Declaration of interests

The authors declare no conflicts of interest.

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