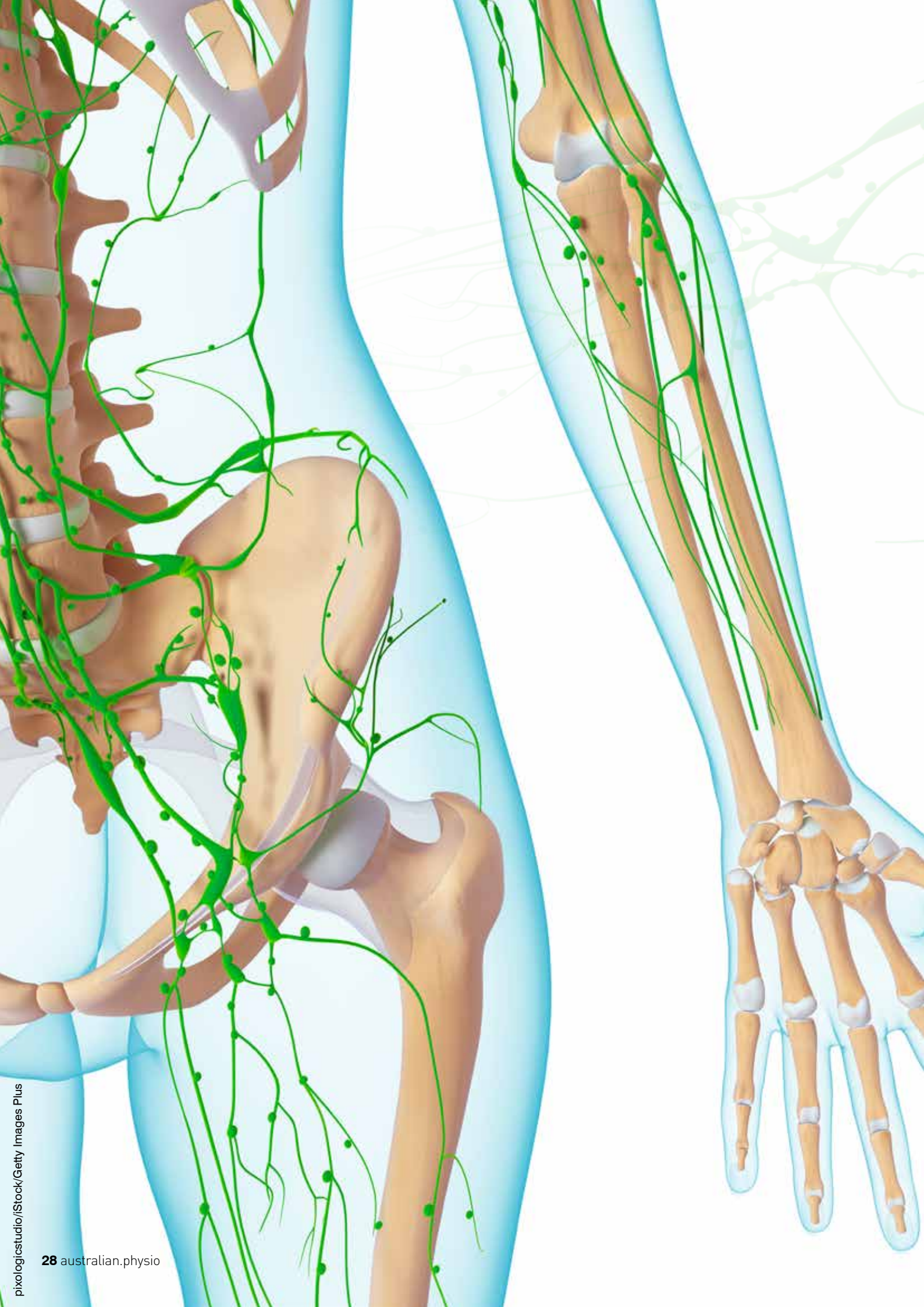

pixologicstudio/iStock/Getty Images Plus

LYMPHOEDEMA: POTENTIAL FOR CHANGE

To coincide with Lymphoedema Awareness Month this March, Christine Smith and Dr Linda Khong present new research, perspectives and case studies to raise knowledge about lymphoedema.

Evidence has identified the cause and development of lymphoedema as a result of cancer treatment. In reality, cancer-related lymphoedema only contributes to a small percentage of lymphoedema cases worldwide. Improving awareness and an understanding of other chronic oedemas will contribute to improving outcomes for these patients. The information presented in this article and the skills of physiotherapists can offer potential change for patients who consider their chronic oedemas as something they have to live with.

Cancer-related lymphoedema is only a relative minority

In developed countries, the focus of lymphoedema has been from an oncological perspective. It is now realised that cancer-related lymphoedemas only account for a relative minority of lymphoedemas. The causes of non-cancer-related lymphoedemas can be parasitic in origin, include a venous component, or result from genetic predispositions and a variety of other underlying pathophysiological mechanisms (Moffatt et al 2019).

A large international multicentre observational study conducted in nine countries, including Australia, has reported the estimated prevalence of chronic oedema to be 38 per cent among hospital inpatients and 56 per cent among the community (Gordon et al 2019; Quere et al 2019). In the Australian arm of this study, of the 222 adult participants with secondary lymphoedema, 93 per cent were not related to cancer (Gordon et al 2019).

As described above, chronic oedema and lymphoedema are terms used interchangeably. This is important when considering prevalence studies as these terms are used synonymously to include the complex causes of chronic swelling (Moffatt et al 2019). Moffat et al further consider chronic oedema to be an umbrella term to include not only conventional lymphoedemas but also chronic swelling that may have a complex cause. Included but not limited to this group are venous oedemas, chronic swelling due to immobility, and chronic swelling due to obesity.

Australia's ageing population, increasing rates of obesity and survival with disability (such as from a neurological, orthopaedic, traumatic or oncological basis) all contribute to increasing rates of these lymphoedemas/chronic oedemas. Chronic oedema in older Australians can be due to multiple health comorbidities including immobility, heart failure, chronic venous hypertension and insufficiency, and obesity, which can contribute to the cause of chronic oedema and lymphoedema due to failure of lymphatic drainage (Moffatt et al 2019).

Physiotherapists are poised to treat

Physiotherapists of any designation are in the prime position to differentially diagnose chronic oedemas and apply a range of treatments and modalities to reduce this type of swelling. The diagnosis and treatment of lymphoedemas or more complex chronic oedemas require more specific skills. The following two case studies provide examples of how combining with and/or accessing a physiotherapist who possesses these skills can have positive benefits across multiple domains.

Oedema associated with a neurological aetiology

APA Neurological Physiotherapist Mena Garcia-Vega, a senior physiotherapist in the neurosurgical unit at Sir Charles Gardiner Hospital, shares the benefits of lower limb oedema identification in clients with a neurological aetiology.

A patient was receiving inpatient rehabilitation and developed chronic oedema of a lower limb due to hemiparesis from a cerebral vascular accident. The chronic oedema was affecting this patient's ability to transfer independently and wear a prescribed ankle foot orthosis. This was causing open wounds, which regularly became infected.

Prior to lymphoedema interventions, the treating team had prescribed diuretics and applied a multipurpose elastic support bandage. This has limited effectiveness because of the volume and stasis of fluid due to the patient's immobility and age. Over time, this oedema progressed from pitting oedema to non-pitting oedema and fibrosis, which is more resistant to treatment.

Mena identified the differences and challenges of this type of oedema in the neurological patient to the hospital's lymphoedema physiotherapist (Linda Khong). Specific lymphoedema treatment included multilayered compression bandaging, resulting in an application of a lower limb compression garment.

Danielle Jackson, senior physiotherapist at Osborne Park Hospital, says that this resulted in a significant reduction of the chronic oedema, enabling improved independence with transfers, wearing of the orthosis (significantly improving the quality of the patient's gait) and a cessation of the infections and wounds. The application of techniques to treat chronic oedema, coupled with rehabilitative techniques, facilitated the patient's ability to participate in rehabilitation. This resulted in reduced length of hospital stay, and raised awareness among the treating team of successful alternatives to chronic oedema management while coupled with improved functional outcomes.

Previously, patient compliance would have been influenced by the ability of the hospital or the patient

Before management of chronic oedema.

Compression therapy—bandaging.

to fund the equipment. With the advent of the National Disability Insurance Scheme (NDIS), however, patients such as those depicted here, once stable and deemed eligible, will be provided with the ankle–foot orthoses and compression garments through the NDIS—reducing a barrier to oedema and functional maintenance.

Oedema associated with an orthopaedic/gerontological aetiology

Christine Smith has been employed as a locum physiotherapist providing physiotherapy service provision in pain clinics at aged care facilities. Federally funded pain programs provide the ability to address pain using non-pharmacological adjuncts for residents living in aged care facilities. At one facility, Christine applied modalities to reduce pain in a 91-year old woman with pain caused by bilateral knee osteoarthritis. This resident subjectively reported pain in both knees and, objectively, deformities were observed in both knees. Oedema was observed and palpated in this area, descending bilaterally into the legs and ankles. Pain modality applications included transcutaneous electrical nerve stimulation machines to both knees with simultaneous heat packs followed by a lymphoedema-based massage method to the knees and surrounding areas. Subjectively, the resident reported greater improvements with this type of massage. Subsequent benefits for this resident included enhancement of gait and resumption of wearing bilateral knees supports, which further reduced pain and chronic oedema.

Potential for change

Physiotherapists have the generalist physiotherapy skills, which, when coupled with specialised lymphoedema skills, allow them to better identify, treat and manage chronic oedemas and lymphoedema. This encompasses a variable caseload of patients ranging from medical to surgical, acute to chronic and clients across the life span. If these specialised skills are required to be called on, physiotherapy colleagues are available to assist. It is very satisfying to be referred to as the physiotherapist who can get a patient's chronic oedema down. Overall, there is real potential for change.

Email **inmotion@australian.physio** for references.

Improvement—fitted with orthosis successfully.

After management of chronic oedema.

Christine Smith, APAM, is a physiotherapist with 17 years of experience working in the area of lymphoedema. Chris graduated from Curtin University with a Bachelor of Science (Physiotherapy) in 1995 and with a Master of Science (Physiotherapy) in 2014. The thesis title of her master's research project was 'The Breast Lymphoedema Severity Symptom (BLYSS) Questionnaire: Development and Validation'.

Dr Linda Khong is an accredited lymphoedema practitioner, APA Cancer, Lymphoedema, Gerontological and Musculoskeletal Physiotherapist and Adjunct Research Fellow. She is a senior physiotherapist at Sir Charles Gairdner Hospital. Linda also practises at LK Lymphoedema Centre (Perth/Claremont) and Latitude 33.7 Physiotherapy (Busselton), WA.

Lymphoedema: Potential for Change (Christine Smith and Dr Linda Khong)
Inmotion March 2020

References

Moffatt C, Keeley V, Quere I. The concept of chronic edema-A neglected public health issue and an international response: The LIMPRINT Study. Lymphat Res Biol. 2019; 17(2):121-126. doi:10.1089/lrb.2018.0085.

Gordon SJ, Murray SG, Sutton T, et al. LIMPRINT in Australia. Lymphat Res Biol. 2019; 17(2):173-177. doi:10.1089/lrb.2018.0087.

Quere I, Palmier S, Noerregaard S, et al. LIMPRINT: Estimation of the prevalence of lymphoedema/chronic oedema in acute hospital in In-Patients. Lymphat Res Biol. 2019; 17(2):135-140. doi:10.1089/lrb.2019.0024.