

THE FOCUS ON OEDEMA THERAPIES MAY BLIND US TO INNOVATION

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Since Emil Vodder described his technique of lymphatic drainage in 1936 there have been many developments in conservative treatment for lymphoedema. Compression, remedial exercises and skin care superseded the surgical approaches that were popular in the 1970s and 1980s, and the cornerstone of current therapy is the Földi method of manual lymphatic drainage (MLD) (Földi et al, 1985).

Although the effectiveness of these treatments is undeniable, two recent advances are expected to change the treatment of lymphoedema in the next few years. First is the increased understanding of the intricate mechanisms of lymphatic disorders, and second is a change in emphasis on the oedema that accompanies obstruction of lymphatic flow.

Our increased understanding has included investigation into the role of hyaluronan retention in the imbalance of interstitial physiology by causing a 'cork effect' in the pre-capillary channels (Liu, 2004). This accumulation may be a trigger that permits stagnant lymph to change the healthy internal environment into the characteristics of lymphoedema.

The development of the new sub-discipline of molecular lymphology (Witte et al, 1997) has identified mutant genes and the subsequent codification of

defective signalling proteins and cellular receptors, most importantly vascular endothelial growth factors (VEGFs) and VEGF receptors. This has opened a wide new field to explore the aetiology and physiopathology of lymphatic disorders. Other areas of investigation include the relationship between fat deposition and lymph stasis.

Although consensus has not yet been achieved regarding the change of approach to oedema, the recognition that it accompanies lymphatic stasis as part of a much more complex syndrome — congestive lymphatic failure — is gradually being accepted by many lymphologists worldwide. A parallel can be made with cardiac disease. Oedema is a major clinical feature of congestive heart failure but no one would put the primary focus of heart failure treatment on oedema reduction — it is reduced only after treating the underlying cause of the primary disturbance. Treatment targets specific causes after its accurate diagnosis.

The same concept should be applied to lymphatic dysfunctions. Oedema is not the disease itself nor will oedema treatment resolve the disorder. Lymph stasis entails several other tissular and physiopathological modifications beyond oedema such as fibrosis, fat deposition, deformity, functional and psychosocial disability, impaired immune trafficking and recurrent infections. Some may argue that cardiac, hepatic, renal and most venous oedemas are poor in protein content,

and principles ruling those oedemas do not apply to lymphoedema. Treatment of other systemic causes of oedema, such as mixoedema and traumatic oedema also focus on the primary disturbance.

Földi has stated that 'the fact that different types of lymphoedema have different aetiologies does not mean that there is a significant difference...in respect to pathophysiology, pathology or treatment' (Földi and Földi, 2003) which means that irrespective of its cause, few things change the clinical presentation. That reasoning leads us to treat congenital lymphoedema, where lymphatics are aplastic or hypoplastic, in the same way as post-mastectomy lymphoedema, where normal lymphatics are abruptly blocked by surgical excision or radiation. This should be reconsidered as the key to improving the care that we offer our patients is correctly interpreting congestive lymphatic failure, and using molecular lymphology to reach a deeper understanding of lymphatic disorders. **JL**

References

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