

Title: Obesity influencing lymphatic load: A new approach

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Abstract:

The patho-physiological insights of lymphatic flow and the development of lymphedema are changing. As formerly it was suggested that in breast cancer related lymphedema destruction of lymphatic vessel leads to obstruction and a stop-cock phenomena and impairment of lymphatic flow, it is now known that more a pump failure leads swelling. (1) On the other hand, lymphatic flow is the result of fluid production by filtration and the ability of the lymphatics to transport the lymph. Several mechanisms influence either the filtration or the transport capacity. Increase of filtration is due to raised venous pressure (eg in venous insufficiency), capillary weakness (eg inflammation, hormonal, medication), immobility or overweight. On the other hand, the transport capacity of fluid is stimulated by exercise and muscle activity and can be impaired by destruction of lymphatic tissue or congenital / genetic dysfunction.

When the production of fluid is raised by more filtration, it is called that the preload is increased. When transport is impaired due to lymphatic dysfunction and the need form more pumping pressure, the afterload is raised. Often both mechanisms play a role.

These new insights have implication for daily practice: In the approach of lymphedema, treatment focuses on reduction of swelling, improvement of functionality and increase of quality of life. Obesity and lack of exercise are the most known influenceable risk factors for the disorientation of lymphedema or the development of lymphedema. (2) (3) (4)

By changing these patients related parameters, lymphatic load will be influenced positively and consequently the lymphedema and co-morbidity for the patient will improve.

References:

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