

Obesity and Lymphedema

Early diagnosis and intervention of lymphedema are crucial for optimal treatment results. Whether lymphedema is caused by developmental abnormalities (primary lymphedema), or surgery/radiation to the lymphatic system (secondary lymphedema), the possible long-term physical and psychosocial burden resulting from untreated or mistreated lymphedema can be serious.

The classification of lymphedema into primary and secondary has little significance in determining the method and goal of therapy. The goal of any treatment is to reduce the swelling and to maintain the reduction – that is to bring the lymphedema back to a normal, or near-normal size so the patients can continue with the activities of daily living, and to limit the risk of infection.

Therapeutic approaches to lymphedema vary depending on the severity of the swelling, the degree of fibrotic tissue present and the affected body part. In the majority of the cases lymphedema can be effectively treated with Complete Decongestive Therapy (CDT). Backed by long standing experience, CDT has shown to be safe and effective as the gold-standard conservative therapy for lymphedema. In some cases it may be necessary to combine CDT with additional modalities, such as intermittent pneumatic compression; for a select group of patients surgical procedures may be necessary to achieve best results.

Successful long-term management of lymphedema also includes the elimination of risk factors that are known to have detrimental effects on lymphedema. One of these risk factors is obesity, which often worsens the symptoms of already existing lymphedema. Studies have indicated a significant connection between obesity and the development of upper extremity lymphedema following breast cancer surgery (1,2,3) and the correlation between body mass index (BMI) and change in the development of lymphedema (4).

Excessive weight and obesity may also contribute to the onset of primary and secondary lymphedema involving the lower extremities. Excessive weight, especially morbid obesity can have a negative impact on the return of lymphatic fluid from the legs; additional fluid volumes associated with obesity may overwhelm an already impaired lymphatic system. Direct pressure on lymphatic vessels by excess fatty tissue, impaired diaphragmatic breathing and decreased muscular function can also be factors contributing to the manifestation of lymphedema.

Chronic venous insufficiency (CVI) is often associated with obesity. The increased burden on the lymphatic system in CVI can play a significant role in the manifestation of lower extremity lymphedema.

Treatment progress in existing lymphedema may be seriously hampered in patients with a high BMI. With obese patients it is often difficult to apply bandages, especially in cases of lymphedema affecting the lower extremities. Furthermore, the compressive materials

(bandages, garments) applied to the affected extremities have a tendency to slide in cases of obesity. Compression garments may have to be custom ordered, creating an additional financial burden to the patient.

Exercise, a very important aspect in the successful management of lymphedema may be negatively affected as well. Mobility problems associated with a high body mass index can affect the patients' participation in treatment, and exercise protocols used in lymphedema therapy for the upper and lower extremities may have to be modified accordingly.

Weight management and proper nutrition are essential for successful long-term lymphedema management.

References:

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