Lipoedema Fact Sheet for GP’s

The term lipoedema is a symmetrical "swelling" of both legs, extending from the hips to the ankles, caused by deposits of subcutaneous adipose (fatty) tissue. While lipoedema is not a disorder of the lymphatic system per se, it occurs almost exclusively in women and may have an associated family history (20 per cent of cases) and is usually accompanied by hormonal disorders as well. If present in a man, it is accompanied by massive hormonal disorder.

Fat in the lower extremities extends to the malleoli (ankle bones), often with flaps of tissue hanging over the foot. The feet are not affected; occasionally, lipoedema is found in the arms. Typically, there are also fatty bulges in the medial proximal thigh and the medial distal thigh, just above the knee. Clinically, the affected individuals complain of pitting edema as the day progresses, which is relieved by prolonged elevation of the leg(s) overnight (Rank and Wong, 1966; Rudkin and Miller, 1994; Casley-Smith, 1997).

For reasons still unknown, the fatty tissue accompanying this condition cannot be significantly decreased by diet.

In Stage I, the skin is still soft and regular, but nodular changes can be felt upon palpation. There are no colour changes in the skin and the subcutaneous tissues have a spongy feel, like a soft rubber doll. In Stage II, the subcutaneous tissue becomes more nodular and tough. Large fatty lobules begin to form on the medial distal and proximal thigh and medial and lateral ankles just above the malleoli. Pitting edema is common, increasing as the day progresses. The individual may report hypersensitivity over the area. Skin colour changes occur in the lower leg, indicative of secondary lymphedema, which often occurs in later stage lipoedema.

Vascular changes combined with the decreased efficiency of the calf muscle pump, result in both the dependent pitting edema seen in Stage I, as well as the secondary lymphedema that often complicates lipoedema in its later stages. Histological changes seen in lipoedema include a thinning of the epidermal layer, thickening of the subcutaneous tissue layer, fibrosis of arterioles, tearing of elastic fibres, dilated venules and capillaries, and hypertrophy and hyperplasia of fat cells.

There are several significant clinical differences between lipoedema and bilateral primary lymphedema. The feet are not involved in lipoedema; while they are edematous with a positive Stemmer's sign in lymphedema, Stemmer's sign is negative in lipoedema. The "swelling" in lipoedema is symmetrical, while in primary lymphedema usually one limb is more involved than the other. The subcutaneous tissues feel rubbery in lipoedema. In advanced Stage II lymphedema, there is significant subcutaneous fibrosis, which feels firmer than lipoedema.

Lipedema is caused by a hormonal imbalance resulting in excessive deposition of adipose tissue, most often in the lower extremities (although it can occur in the upper extremities as well. The time of onset of the "swelling" in lipoedema is usually around puberty and 90 per cent of these cases have accompanying diagnoses of hormonal disturbance (thyroid, pituitary, or ovarian).

Significant functional improvements are possible with good program compliance and therapy intervention. Medical management involves treating the hormonal disturbance as effectively as possible and providing nutritional guidance to avoid additional weight gain.

Application of the combined lymphedema treatments has shown some success in relieving the pain and hypersensitivity in the lower legs and improving general mobility.

Kristin Osborn
Lymphologist