

CARE OF A PATIENT WITH SEVERE LYMPHEDEMA PRE-and POST -OP TOTAL KNEE REPLACEMENT

The patient first visited our clinic for lymphedema therapy in July 1998. Having had lymphedema for almost 10 years, secondary to hysterectomy for cancer followed by radiation of the lower abdomen, she was well acquainted with bandaging and self-MLD. Her daytime garment was a unilateral CCIII - AG and her nighttime garment was a custom Legacy - AG over which she either applied a pump sleeve and pumped before retiring or she would wrap short stretch bandages. Our concerns were: the very dry condition of the skin and the presence of a large erythematous area on the anterior lower leg; the increased girth of the lower leg and calf; the knee was very heavy with lymphedema and becoming increasingly immobile; and there was a ridge of fibrosis extending posterior from the ankle into the popliteal space. Though the patient stated the area of erythema had always "been that way and sometimes worse", we were concerned about the possibility of a chronic inflammatory process of the lower leg. And when the patient repeatedly commented about increasing pain and immobility of the affected left knee, we became concerned about the efficiency of fluid movement through, and away from the knee joint. It appeared that the knee was the "problem area" for the lower leg and calf. The patient then stated her fears of possible knee surgery. Our focus was to reduce and maintain the left affected leg by: concentrating on intensive skin care to reduce inflammatory processes, increasing combined decongestive therapy (CDT) sessions; checking the viability of compression supplies and her present gradient compression stockings along with the directional flow garment, initiating an exercise regimen, planning different compression solutions to enhance reduction, and protecting the unaffected right leg from the possibility of lymphedema occurrence. As knee pain and immobility increased, she continued to have severe back problems, and any amount of exercise became a real challenge.

By January 2002, the patient's posture was worsening - she was stooping over more radically and any slight rotation of the knee brought on excruciating pain. She began preparation for knee surgery by scheduling pre-operative CDT sessions and getting mentally and emotionally prepared. Therapy sessions included: gradient sequential pumping by applying a full leg pneumatic appliance over a directional flow garment for 30 minutes while manual lymph drainage was performed on the torso; intensive manual lymph drainage was continued on the left affected lower leg and calf post pumping; full-leg circumferential measurements; intensive specialized skin care especially in the erythematous areas of the anterior lower leg; and application of an accessory compression garment (an AD (toes to knee) garment over an AG (toes to groin) garment) to give a greater degree of compression on the distal calf.

Post-surgical protocol for therapy was planned focusing on channeling lymph medial to lateral left torso and upper leg, including affected knee, into ipsilateral collaterals. The directional flow garment was constructed to follow protocol exactly and designed in two pieces: a high body part around the torso and a separate open full leg unit with Velcro closure tabs positioned laterally.

Velcro tabs, positioned vertically, anterior and posterior on both garments made it possible to attach them together during application. Directional flow garments are designed with gradient pressure from many directional flow angles. Each unit is also

constructed with passive compression to allow movement of lymph fluid along normal lymph pathways. These three ingredients: gradient pressure, directional flow, and passive compression must work together to be effective. In addition, it is very important *for* the lymphedema therapist to have experience in post-operative care so that protocol *for* therapy is correct in order to effectively protect the patient. Post-op care *for* the patient meant protecting the knee. After thorough hand washing, MLD was performed according to protocol, the skin cleansed well and lotions applied and the surgical incision well protected. The affected left leg was then placed into the open directional flow garment and using the lateral Velcro tabs, the leg unit was lightly tightened from ankle to groin to the patient's tolerance. The body part was then fastened around her waist and attached to the leg portion thus completing directional flow, gradient pressure and passive compression. Following hospitalization, this "open directional flow garment" was perfect *for* the patient's home care until the knee healed sufficiently and she was able to apply her regular directional flow garment.

In conclusion: comprehensive care post-operative knee replacement using CDT and a directional flow garment indicates:

- reduction of fluid retention at operative site
- inflammatory processes reduced
- earlier mobility of the knee with gradual greater range of motion
- reduction in pain
- accelerated wound healing
- decreased possibility of keloid process
- reduced recovery time
- safeguards patient against lymphedema crisis
- patient's satisfaction of overall care

Submitted by Phyllis Tubbs-Gingerich, RN, BSN, LE, CLT-Lymphedema Therapist
(LANA)

Ginger-K Center

16130 Juan Hernandez Or, Ste 108 Morgan Hill, CA 95037

Tel: 408-782-1028

Fax: 408-782-1061

e-mail: phyllis@gingerkcenter.com web site: www.gingerkcenter.com

November 10 ,2002