

ABSTRACT: The Symposium on Advanced Wound Care (SAWC), Dallas, TX, April 2011

Refractory Wound Lymphorrhea responds to Longitudinal Yarn Elastic Compression: yarn focused compression preserves patent subdermal lymphangions to decrease lymphatic hypertension.

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Problem

Wounds presenting with lymphorrhea are challenging, often impossible, to heal. Lymphorrhea maceration stimulates chronic granulation tissue, unhinging healing. The mechanism of healing pathophysiology in lymphorrhea is not well understood. (1) Traditional lymphedema therapy, limb elevation, elastic compression and pneumatic compression, in our clinic's anecdotal experience, is not uniformly effective to heal wounds with lymphorrhea that is visible, drip by drip, at first clinic visit.(2)

Longitudinal Yarn Compression (*) (LYC) textile delivers a halo of elastic compression to subcutaneous fat over one fifth of the skin surface via parallel fuzzy yarns. Furrows in the skin form under yarns as edema fluid drains out of the subcutaneous fat. Patent lymphangions between longitudinal yarn allow for effective egress of lymphatic effluent. Treating wound lymphorrhea with traditional circumferential elastic compression occludes subdermal lymphangions, lymphatic hypertension persists, and lymph fluid continues to escape via the wound.(3) We hypothesize that LYC textile stops lymphorrhea by effectively lowering subdermal fat lymphatic hypertension. Yarn focused compression delivers physiologically effective elastic compression to one fifth of the skin surface, preserving patent lymphangions in four fifths of the subcutaneous fat to efficiently evacuate edema fluid.

Methods

Three patients with active visible leg wound lymphorrhea were treated with LYC textile as the first layer, elastic engine, of a four layer dressing. Photos document technique and healing.

Results

Photos document technique and results: two patients completely healed, and the 3rd patient's ulcer was 80% healed at time of death from metastases.

Conclusions

Longitudinal Yarn Compression textile appears to deliver elastic compression that stops wound lymphorrhea.

* EdemaWear®, Compression Dynamics LLC, Omaha, NE

References

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