CLINICAL HIGHLIGHTS

Patients Show Significant Decrease in Wound Size and Leg Circumference from Use of Lympha Press Pneumatic Compression

Original Article: The Role of Intermittent Pneumatic Compression in the Treatment of Lower Extremity Chronic Wounds

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BACKGROUND

A large, tertiary care academic medical center in New York City set out to investigate the effect of intermittent pneumatic compression (IPC) on a subset of its patients.

Lymphedema and venous statis disease patients are often prescribed IPC devices as noninvasive adjuncts to promote flow and reduce the adverse effects of interstitial edema associated with both disorders. This study focused on lower extremity wounds associated with venous and/or lymphatic disease, often referred to as “lymphophlebitic” disease.

Ten morbidly obese patients (both male and female) between the ages of 50 - 88 were selected. Those considered for the study had long-standing severe venous insufficiency and active lower extremity ulceration. Patients unable to tolerate compression therapy or with inadequate limb perfusion were excluded from the quality assurance study.

The calibrated gradient compression pump commercially known as Lympha Press® (Mego Afek Ac Ltd, Israel) was used in the study.

Lympha Press® PCD-51 and leg sleeve

ABSTRACT

Intermittent pneumatic compression (IPC) devices are often used as noninvasive adjuncts in patients primarily with lymphedema, and more recently with venous stasis disease. IPC is designed to promote flow and reduce the adverse effects of interstitial edema associated with both disorders. The study focused on lower extremity wounds associated with venous and/or lymphatic disease, the combination often referred to as “lymphophlebitic” disease, and the treatment effect of IPC on this disease process and its sequelae.

The author(s)’ own experience of treating 10 patients who had venous stasis ulcers > 6 months in duration that had not improved with multilayer compression is described. Ten patients that had long standing lymphophlebitic disease and open ulcerations were treated with the addition of IPC (Lympha Press® - Mego Afek Ac Ltd, Israel) providing multi-chamber sequential compression. The 10 patients were treated with three-layer compression therapy in conjunction with IPC; sequenced at 40-60mmHg for 1 hour and 15 minutes a day.

STUDY DESIGN

Over the course of eight weeks:

- Patients were treated with three-layer compression therapy in conjunction with Lympha Press IPC at a minimum of 40mmHg for 75 minutes, once daily.
- Progress was monitored weekly in clinic.
- Wounds were cleansed thoroughly and assessed for change during each visit.
- Pain and treatment tolerance were also assessed weekly.
- To provide a consistent and precise measurement for every patient and to limit subjectivity, wounds were tracked using eKare computer software.
- Circumference measurements at the ankle, mid-calf, and upper lower leg were also taken using a ruler.

Before and After 4 weeks treatment with Lympha Press®

RESULTS

After only one week of therapy, most patients showed a decrease in leg circumference.

Most patients saw a significant decrease in wound size, with many having complete wound healing.

Most patients noted a decrease in exudate, odor, and pain after prolonged use.

There were no reports of discomfort associated with Lympha Press usage, and most patients enjoyed the use of the Lympha Press.

CONCLUSION

Lympha Press intermittent pneumatic compression therapy benefits patients with lymphophlebitic disease, especially those whose calf muscle fails to pump. This advanced therapy is an effective part of an algorithm that includes direct wound bed management, moisture control, possible primary venous disease intervention, physical therapy, weight loss, and improved nutrition.

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