

# Muscle Pump Activator (MPA) Device: A Case Study in Chronic Leg Lymphedema and Papillomas

Reeves, J., LPN, Gosse, M., RN, IIWCC (C), Sinclair, H., OT, IIWCC, Swindell, J., RN, Gates, T., LPN

## Aim

To evaluate the MPA wound therapy device to reduce chronic lymphedema and papillomas prior to initiating compression therapy.

The resident tolerated the fluid shift well, the papillomas reduced in size and scaled off with light friction during cleaning.



### Procedure/Method

A 60-year-old lady resided in a Long-Term Care (LTC) setting since 2017.<sup>1</sup> She was confined to bed for 4 years, developed papillomas over the lateral aspect of the right thigh with recurring infections secondary to chronic lymphedema.<sup>2</sup>

Previous treatment modalities included best practices and evidence-based therapies. In 2021, the MPA wound therapy device was implemented as an adjunctive therapy. Consent for photos and reproduction for publication was obtained from the resident.

The MPA wound therapy device was placed over the right fibular head as directed in the Manufacturers Instructions for Use to stimulate the common peroneal nerve which activates the calf and foot muscle pumps.

This action improves venous return, reduces edema, increases microcirculation, blood flow velocity and pulsatility.<sup>3</sup>

Prior to initiating the MPA wound therapy device average daily urinary output was 800-1000cc's per day. During four weeks of MPA wound therapy treatment the urinary output was 4-5L/day with a weight loss of 60lbs. There was no impact on the patients' serum potassium (pre MPA -3.6mmol/L, post MPA device -4.8mmol/L).



### Findings/Results

Prior to initiating the MPA device, she was unable to tolerate high compression therapy due to pain. Following the reduction of edema, she was fitted with tubular elastic compression. Her caregivers reported that she experienced an improved quality of life and was able to sit in a chair for 2-hour intervals.

Psychologically, the resident indicated that she "feels great," and was pleased to become more engaged in her care by moving independently in bed.



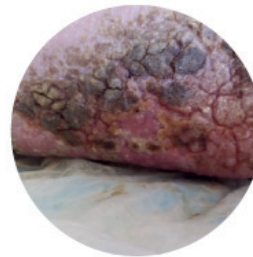
### Implications/Applications

The outcome and potential application of the MPA wound therapy device used as an adjunctive therapy can significantly reduce edema, and decrease pain to comfortably initiate compression therapy that wasn't previously tolerated.<sup>3</sup>

The staff expressed that the MPA wound therapy device was easy to use, they were happy with the results. This was a positive experience for both the caregivers and the resident.



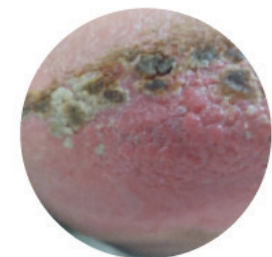
October 13



October 19



October 28



November 3

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wound therapy

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