

# VIBRO-PULSE™ CASE STUDY: Arterial leg ulceration / Oedema.

## SUMMARY:

- 51 years old
- Arterial Leg Ulceration 13 months duration.
- Ulcers healed at week 8,

**PATIENT INFORMATION:** A 51 year old female patient Mrs C has a history of rheumatoid arthritis, osteoarthritis and ischemic heart disease, limited mobility due to shortness of breath and gross oedema of both legs. She had a good right femoral pulse but the left femoral pulse was weak. No other pulses were palpable due to oedema. An audible anterior tibial pulse was present on using the hand held doppler. ABPI was later measured at 0.7 Duplex scan showed triphasic signals in the Common Femoral artery, Profunda and Superficial Femoral artery. Although the Popliteal artery was patent there was a biphasic signal detected in the proximal end of the artery reducing to a monophasic signal distal to this. This indicated severe distal disease. The ulcers diagnosed as mixed aetiology but to be treated primarily as arterial.

**WOUND:** On commencing cycloidal vibration therapy (VIBRO-PULSE™) Mrs C had a 16 cm sq ulcer on the back and a 37.5 cm sq ulcer on the front of her left leg both present for 13 months.

**OEDEMA:** Calf circumference 47 cm.

**Cycloidal Vibration Therapy (VIBRO-PULSE™):** started 3 x a day for 30 minutes per treatment.

**DRESSINGS / BANDAGING: EXUDATE:** Dressings changed 3 x a week due to exudate, Mepitel contact to reduce pain, Actisorb Silver 220 to address colonisation issues, Viscopaste to limit oedema formation without overloading circulatory system, Sofban and K-Lite bandaging to secure the dressing.

## WEEK 1 of VIBRO-PULSE™:

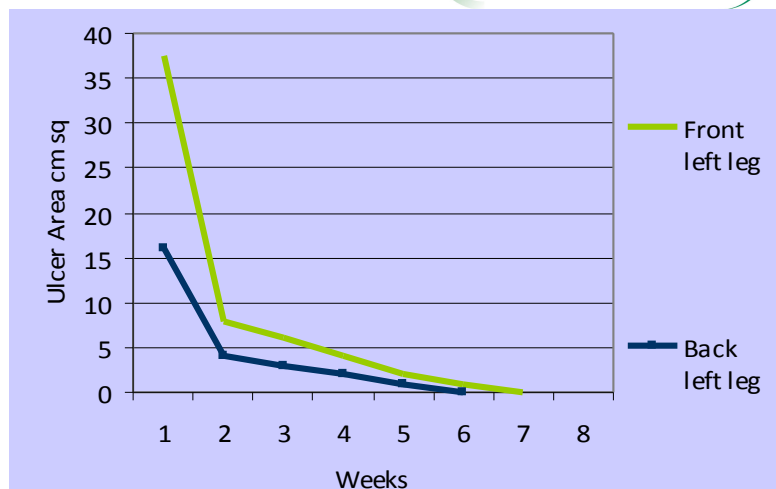
**WOUND:** The ulcers shallower signs of granulation and drebridement over 75% reduction 4 cm sq and 8 cm sq..

**OEDEMA:** Calf circumference reduced to 39 cm.

## WEEK 8 of VIBRO-PULSE™:

**WOUND:** The leg ulcers had healed.

**SATISFACTION:** Historically patients with this distal problem who develop ulceration resulted in amputation. Due to the positive results to date using Vibro-Pulse the nurses feel they have an opportunity to assist further in this patients ulcer healing. Whereas previously due to the arterial aetiology, it was felt that management options to deal with the oedema and ulceration were limited.



*Left leg Back and Front before VIBRO-PULSE therapy*



*Left leg Back and Front after 7 days of VIBRO-PULSE therapy*

**SUMMARY:** This case study has demonstrated the effects of using cycloidal vibration to stimulate circulation, when compression bandaging cannot be applied due to arterial aetiology.