

Using knowledge and experience to overcome the clinical challenges in the management of significant arterial disease

Gordon Stewart, Vascular Consultant, The Ayr Hospital

Kathleen Turnbull and Kim Kieran, Clinical Nurse Specialists in Leg Ulcer Management, Leg Ulcer Service, Heathfield Clinic, Ayr.



Introduction

Patients are often denied treatment due to lack of specialist knowledge with nurses quite rightly erring on the side of caution. This poster seeks to explain the role of the leg ulcer specialist nurse within a dedicated service, and the results that were obtained when the patients were given the appropriate treatment.

Background to the study

A new model of care has been developed and piloted in Ayr, Troon and Prestwick, Ayrshire, to improve healing and recurrence rates for patients with chronic leg ulcers. Key features include direct referral of leg ulcer patients by any practitioner to Leg Ulcer Specialist Nurses who are linked to a Vascular Unit (for one-stop vascular assessment) providing structured, evidence-based, patient focused care plus a structured secondary prevention programme. Between May 2003 and April 2004 inclusive there were 170 patients referred to the leg Ulcer service. 130 patients had predominantly venous ulcers (16 bilateral) Healing rates for the 146 ulcerated legs were 85% at 12 weeks and 95% at 26 weeks. Recurrence between 12-24 months post healing was 8%.

The following two case studies were not part of the original pilot. They have been selected to illustrate how the knowledge and skills of a dedicated and highly skilled leg ulcer team working with the backup of a Vascular Unit can benefit patients who may otherwise not have been treated with compression.



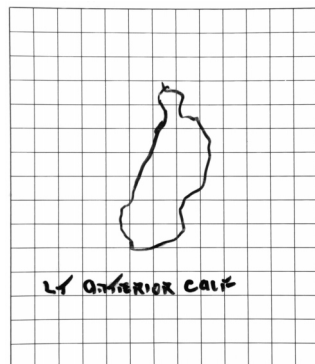
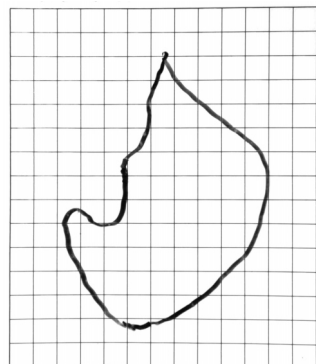
Left anterior ulcer - 25/09/2006



Left anterior ulcer - 06/11/2006



Healed maintained in Activa liners



Patient 1

Diagnosis

- (1) Bilateral leg ulcers
- (2) Peripheral vascular disease- arterial duplex scan shows monophasic flow in both common femoral arteries suggestive of proximal arterial disease
Doppler ABPI Left 0.59 Right 0.63
- (3) Mobile with assistance
- (4) Frail elderly lady

Background

93 year old lady in nursing home care referred to the Leg Ulcer Service by the GP. Ulcers on the left leg had been present for many years. The ulcers on the right leg had been present for 6 weeks. These are both recurrent episodes with reported multiple episodes occurring over many years.

Past medical history: MI 1996
Dementia
Parity 1+ 0
BMI 30

A full holistic assessment including Doppler ultrasound was carried out Specialists Doppler ABPI reading.

Doppler ABPI

| Left | Right |
|--------------------------|-------|
| 0.59 | 0.63 |
| Pulses biphasic sounding | |

No reported night or rest pain or claudication symptoms. Poor mobility. Limb dependency.

Leg appearance: Slight lipodermatosclerosis (LDS) both legs
Mild ankle flare and varicose veins present both legs

Ulcer x 1 on right leg situated on lateral gaiter.

Ulcer x 2 on left leg situated on medial and lateral gaiter areas.

Ankle circumference: Right 20cm Left 21cm.

Single Actico® cohesive short stretch bandages were applied to both legs and nursing homes commenced single Actico® short stretch bandage systems both legs. Nursing home staff advised to observe closely for any signs of pain or discomfort and to remove

bandages if necessary. Single Actico® cohesive short stretch bandages were applied to both legs and nursing home staff advised to observe closely for any signs of pain or discomfort and to remove bandages if necessary.

The short stretch bandages were chosen as the low resting pressures are advisable for moderate arterial impairment (EWMA guidelines 2004). The bandage system was well tolerated with initial dressing changes twice weekly reduced to once a week.

Bilateral Arterial and venous duplex scanning carried out at Ayr Hospital with review by Vascular Consultant. Arterial duplex scanning confirms the presence of moderate peripheral vascular disease showing monophasic flow in both common femoral arteries suggestive of proximal arterial disease.

Venous scan show the presence of mild superficial incompetence in the left leg. Treatment continues under the care of the Clinical Nurse Specialists.

Healing achieved left after 15 weeks and right after 11 weeks.

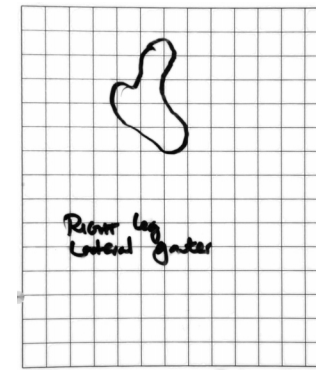
Measured and fitted with Activa® 10mmHg liners and carers instructed in daily skin routine to apply daily emollient using Epaderm and to observe legs daily for any signs of trauma or recurrence. Leg ulcer service will continue to visit 3 monthly as part of a structured secondary prevention programme. The ulcers have remained healed.



Right lateral ulcer - 04/10/2006



Left lateral ulcer - 04/10/2006



Patient 2

89 year old lady referred to the leg Ulcer Service by the District Nurse with a very large ulcer on the anterior aspect of the left lower leg secondary to trauma which had been present for 2 months. This is a first episode. See photo & tracing.

A full holistic assessment using a standardised evidence-based assessment tool was carried out by the Clinical Nurse Specialists including Doppler's.

Past medical history: Type 2 diabetes, hypertension.

Leg appearance: LDS, ankle flare and varicose veins present in both legs.
Ankle circumference: Left & right 17.5 cm.

Social: Lives alone, walks freely, unrestricted ankle movement, previous smoker, mobile and fully independent, good appetite.

Difficult Doppler assessment as pulses very soft even with headphones but sounds were suggestive of arterial disease. No night or rest pain or intermittent claudication.

Treatment was commenced using a single Actico® cohesive short stretch bandage over a layer of padding, and this was well tolerated by the patient. The primary dressing consisted of Zipzoc tubular zinc paste bandage with additional wound pads to assist healing and to care for the surrounding skin.

Bilateral arterial and venous duplex scanning was carried out. Arterial duplex scanning confirmed the presence of significant arterial disease with monophasic flow in the common femoral artery consistent with significant proximal disease as well as femero-popliteal occlusive disease. Venous duplex scanning showed mild superficial venous incompetence.

The patient was reviewed by the vascular consultant, and in view of the slow but steady progress and tolerance of the bandage system patient's care continued to be managed conservatively by the clinical nurse specialists.

The dressings were changed twice weekly initially, reducing to weekly with healing achieved in 18 weeks. The patient was measured and fitted with Class 1 hosiery with liner system.

Daily skin care with an emollient and regular review as part of a structured secondary prevention programme continues and to date the ulcer has remained healed.

Conclusion

Arterial wounds present a difficult challenge to the practitioner, but without the appropriate compression these wounds may have remained unhealed indefinitely. Specialist teams have the experience, knowledge and skill to diagnose and manage these patients with the necessary caution whilst still selecting safe treatments that allow healing to take place. The two case studies above demonstrate how the careful choice of treatment and on-going monitoring can result in a positive outcome.

References

- EWMA Positioning Document on Bandaging, A Guide to Safe Practise.
- Prytherch J et al. Implementation of Actico® for patients with mixed aetiology ulceration. Wounds UK 2003.
- Ruff D, Short Stretch Bandaging – a case history. Nursing in Practise, March 2002.