

Common Findings in the Assessment of the Lower Leg*

The “first step” toward reducing the incidence of foot/leg ulcers is recognizing clients that are at risk.

	Venous	Arterial	Neuropathic
Pain	May be associated with deep palpation, infection, or atrophie blanche May be relieved with elevation	Intermittent claudication Pain at rest “Knife-like” Aggravated by elevation	Denies pain If present may indicate infection
Edema	Usually forefoot to knees Edema ↓ in AM, ↑ in PM	Variable, related to immobility	Not usually
Skin	Varicosities Hemosiderin staining LDS Dermatitis/cellulitis Atrophie blanche	Skin: thin, shiny, hairless Dependant rubor/ blanching on elevation ↓Capillary refill time Nails: thick, yellow, brittle missing	Hyperkeratosis over weight-bearing points Subkeratotic hematoma NLD
Wound Location	Peri - medial malleoli, Often in area of LDS History of recurrence	Usually feet or toes	Plantar surface of foot, over bony prominences
Wound Shape	Irregular	Round	Round
Wound Base	Variable, frequently exudative	Pale, necrotic	Variable Peri wound callous + +
Sensation	Normal	+/- Parasthesiae	Parasthesiae Loss of <i>protective</i> sensation, unable to feel monofilament 5.07/10g
Temperature	Normal ↑ if infected	Cool/cold ↑ if infected	Normal ↑ if acute Charcot event or infected
Deformity	Re: to disease or trauma: affects gait and thus calf muscle pump power	Not usually	Related to neuropathy, sometimes clawed or rocker bottom sole
PPG	Abnormal (< 25)	Normal	Variable re: to motor neuropathy
ABPI	Compressable if: 0.8 – 1.2	<0.8 0.5-0.8 marginal flow <0.5 inadequate flow – severe	May not be accurate with neuropathy Should use toe pressures (> 30mmhg)
Doppler Exam	Audible, high pitched, crisp sounds	Weak, Bruit ↓ on elevation of limb	May be bounding with Charcot event

*** Caution: Clinical presentations may be mixed**

1. Krasner, Rodeheaver & Sibbald. Chronic Wound Care: A Clinical Source Book for Healthcare Professionals. 3rd Edition, (2001). Health Management Publications Inc., Wayne, PA.
2. Moffatt, C. & Harper, P. Leg Ulcers. (1997). Churchill Livingstone, New York, N.Y.
3. Van Rijswijk, L. (1998). Assessing the risk of foot ulcers. Home Healthcare Nurse, 16, (1), 25-33.
4. Ostomy/Wound Management November 2000, Vol. 46, Issue 11 and February 2001, Vol. 47, Issue 2.
5. www.cawc.net

Definitions

1. ABPI: Systolic reading of Ankle pressure over Brachial pressure using doppler
 - Normal (Ratio) is 0.8-1.2. For example, A/BI=0.8 indicates that the blood flow in the ankle is 80% of that in the arm.
2. Charcot joint: a neuropathic arthropathy, occurs in the presence of neuropathy with the added factor of trauma, may cause collapse of the arch of the foot and a rocker bottom deformity.
3. Hemosiderin staining: brownish pigment changes in the skin due to deposition of RBCs
4. LDS: Lipodermatosclerosis – thickening of skin, loss of elasticity in the gaiter region
5. NLD: Necrobiosis lipoidica diabetorum – a yellowish-red discoloration on the shins of individuals with diabetes.
6. PPG: Photoplethysmography – information regarding valve and/or calf pump function
7. Atrophie blanche: white, avascular areas of scar tissue, susceptible to skin breakdown

Key Interventions & Contra-Indications

Venous

Key Intervention:

Compression therapy to reduce edema
Calf pump exercises, elevation and gait training if required
Compression therapy, long term, for the rest of life
Educate client/caregiver re: interventions and lifestyle choices

Contra-Indications:

Acute DVT, active untreated infection, uncontrolled CHF, pelvic mass

Arterial

Key Intervention:

Pain control
Infection control
Maximize blood flow
Smoking cessation
Protect feet from injury – proper footwear, activity modification, professional nail and skin care
Educate client/caregiver re: interventions and lifestyle choices

Contra-Indications:

Compression, elevation above heart level, extremes in temperature

Neuropathic

Key Intervention:

Offload bony prominences, non-weight-bearing over ulceration
Protect feet from injury and infection
Proper footwear, activity modification, professional nail and skin care
Daily foot inspection
Metabolic control
Blood pressure control
Smoking cessation
Educate client/caregiver re: interventions and lifestyle choices

Contra-Indications:

Extremes of temperature, trauma inducing medications (eg. callous remover)