

Differentiating Lower Leg Wounds: Part 2: Arterial Insufficiency (Ischemia)

What Is It? Insufficient arterial perfusion to an extremity or location. Most cases of arterial insufficiency are caused by atherosclerosis, a condition in which the arteries become clogged by cholesterol plaques. This results in poor blood flow to the affected blood vessels and may also lead to the increased formation of blood clots (thrombus) due to the turbulence caused by these plaques.

Predisposing factors include peripheral vascular disease, diabetes, smoking, hypertension, hyperlipidemia, advanced age.

Typical location includes between toes or tips of toes, over phalangeal heads, around lateral malleolus, sites subject to trauma or rubbing of footwear.

Common Characteristics in Patients

- Shiny, taut, dry skin
- Hair loss to lower extremity
- Thickened toe nails
- Pallor on elevation and dependent rubor
- Pain – intermittent claudication (exercise), resting, positional, nocturnal;
- Decreased skin temperature
- Peripheral pulses diminished or absent
- Capillary refill delayed (> 3 seconds)
- Ankle/brachial index < 0.8

Typical Wound Characteristics

- Color: Pale or necrotic ulcer bed (gangrene may be present)
- Depth: Deep (full thickness)
- Wound Margins: even, punched out
- Exudate: minimal
- Infection: frequent



Examples of arterial insufficiency



Treatments for Arterial Insufficiency (Ischemia)

- **Treatments** include no smoking, adequate nutrition, compliance with medication, diabetes control, neutral or dependent position of legs, avoiding constrictive clothing, routine professional foot care, revascularization if possible, medications to improve RBC transit through narrowed vessels (eg. Trentol).
- **Topical Therapy** includes keeping dry, uninfected necrotic wounds protected and dry by using an agent such as betadine. If the wound is open, products such as honey gauze, hydrogels, and collagen can be used on minimally draining wounds and calcium alginates, honey alginates, collagen and foams on moderately to heavily draining wounds.

Remember: It is imperative to keep any exposed tendons moist at all times in order to maintain function of the tendon.

Sources:

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