Optimizing Wound Care Outcomes: Pre and Post Procedure Protocols

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Define the problem!

- Prior to any therapeutic intervention, identify etiology
- Comprehensive approach is mandatory to optimize wound care outcomes
- **Systemic** evaluation/treatment based on ulceration/wound
“Treat the patient, not just the ulcer”

- Identify modifiable risk factors
- Have appropriate specialists manage specific issues
- Thorough communication with patient and patient’s family integral to improving outcomes as well as keeping expectations realistic
Multi-specialty Approach

• Diabetes, smoking - PCP, endocrinology
• LE arterial/venous ulcerations: Podiatry, surgery
• Vascular inflow/outflow: Vascular surgery, Cardiology, Radiology
• Infection: PCP, Infectious Disease
• Nutrition: Home Health, Nutritionists
• Best case scenario to combine all specialties under one roof
• If not possible, collaboration and communication between specialists is a must
• Again, emphasis has to be made on a systemic approach, not just local wound care
Identify etiology

- Surgical wounds
- Venous ulcers
- Arterial ulcers
- Diabetic ulcers
- Pressure ulcers
- Mixed ulcers
Preparing the Wound Bed Paradigm

Person with a Chronic Wound

Treat the Cause
- Address causes and co-factors affecting healing

Local Wound Care

Patient-centred Concerns
- Adherence to plan of care
- Quality of life
- Caregiver/family

Debridement

Inflammation or Infection Control

Moisture Balance

Edge of the Wound
Active therapies
- Biological agents (acellular and cellular)
- Skin grafting
- Adjunctive therapies

Adapted from Sibbald RG, Orsted HL, Schultz GS, et al.®
Healing Outcomes

• Healable Wounds: goal is for closure with functional integrity
• Maintenance wounds: Slow healing, goal is for patient independence w/o further progression
• Non-healable wounds: Prevent progression to other areas/systemic, pain control, amputation
Site specific protocol

- Irrigation of wound bed
- Topical antiseptics (i.e. pre-treatment with chlorhexidine)
- Debridement - sharp, enzymatic, maggot tx
- Wound closure - suture
- Scar management - sunscreen, massage
Hyberbaric Oxygen Therapy

- Diabetic foot wounds - significantly reduce the risk of major amputation and improve healing
- Mandibular osteoradionecrosis - help close fistula tracts, decrease amount of exposed bone, obtain complete closure
- Peripheral nerves - improvement in functional recovery following microsurgical repair
Pre-endovascular arterial intervention protocol

- Absolutely must have thorough arterial exam performed
- Rule-out other etiologies prior to performing endovascular procedure (i.e. venous, pressure)
- Quality abdominal and LE arterial performed to define complete inflow
- ABIs AND TBIs
- Cannot emphasize enough importance of risk factor modification
Pre-protocol

- If U/S is sub-optimal, obtain abd/pelvis/LE run-off CTA
- Identify any renal/iodine issues PRIOR to procedure (as well as for CTA)
- Discuss with surgical colleagues about alternative therapies if warranted
Peri-procedural issues

• Discuss with wound care team about possible use of anti-platelet agents (i.e. plavix) and concerns with debridement

• May plan local procedure immediately after or before debridement depending upon blood loss expectation/tissue depth/surgical concerns

• Watch-out for groin complications!!
Post-procedure Protocol

• Patient should have f/u with wound care specialist within 1 week of endovascular procedure and weekly thereafter until wound closure

• ABIs +/- LE arterial U/S to be repeated in one month, f/u by repeat study at six months

• Timing of repeat studies variable as rate of healing/progression will often dictate individual approach
Post-procedure outcomes

• Important to realize limitation of PTA/atherectomy/stents for long-term cure of LE arterial disease

• Patient may have wound/ulcer closure but ultimately may have re-stenosis of target vessel (especially infra-popliteal arteries)

• Key is to MODIFY life-style issues so patient does not have recurrence of ulcerations (i.e. adjustment of foot-wear, avoidance of walking barefoot, diabetes control)
Summary: Pre

- Pre: Risk factor modification, comprehensive approach, target lesion etiology/identification, appropriate pre-procedure testing (i.e. ABIs)
- Nutrition, infectious diseases, metabolic issues to be identified
- STOP SMOKING!!
• Discussion about possible long-term usage of anti-platelet medications with both patient and wound care team
• Maintenance of close wound care f/u and antibiotic tx (if pt receiving outpatient therapy)
• Nutritional/social support
Summary: Post

• Immediate f/u with wound care team within the week
• Repeat vascular testing as deemed appropriate
• Additional endovascular procedures as needed (i.e. contralateral limb for bilateral ulcerations)
• It takes a village to raise a child...it takes a team to heal an ulcer!