Degloving Injuries
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Mechanism of Injury
- Degloving Injury
  - Shearing force
  - Extremity caught between fixed and rolling plane
  - Separates skin and subcutaneous tissue from deep fascia
- Open degloving injury
  - Frequent
- Closed degloving injury
  - Rare
  - Dermal and epidermal tissue intact

Treatment goal
- Stable, durable weight bearing surface
- Modest shoe
- No brace
- Skin grafts
- Heel and sole area
- Less resistant to wear
- Less difficult
- Flaps
  - Fully functional
  - Complex
Treatment Options

- Negative Pressure Therapy
  - Duration
  - Compliance/Accessibility
- Full-thickness Skin Graft
- Small superficial defects
- Large defects require vascularized coverage
- Local Advancement Flap
- Limited local mobility
- Cross-leg Flap
- Multiple procedures
- Skin Defecting
- Distal Sural Flap
- Heel/ankle area defects
- Medial Plantar Artery Island Pedicle Flap
  - Heel defects

Gu et al.

Negative Pressure Therapy

- Wound VAC
  - I & D
  - Skin Graft
  - Allows time for treatment of other injuries
  - Improve bacterial clearance
  - Increase blood flow
  - Promote granulation tissue
- Complications
  - Long hospitalization
  - Infection
  - Antibiotic resistance
  - Cost

Andres et al.
Skin Defatting Technique

Skin Defatting Continued

- Results
  - 81% or 17/21 graft incorporation
  - Post-op
  - Posterior splint for 7-10 days

- Complications
  - DM skin breakdown
  - Hypertrophic scarring
  - Protective sensation 6 months - 5 years

Golden Rule
  - Replace Like With Like
Distal Sural Flap

- Flap
  - Area of gastrocnemius muscle heads
  - Sural nerve, artery, lesser saphenous vein
  - Should be 1 cm bigger in size than defect
- One stage vs. two stage
- Two stage-delayed technique
- Donor site
  - Split thickness skin graft

Medial Plantar Artery Island Pedicle Flap

Flaps Continued

- Post-op
  - Loose dressing
  - Check sites 10 days after
- Complications
  - Age is risk factor with atrophic skin
  - Obese patients
    - Flap too thick
    - Necrosis
    - Fascio/subcutaneous layer survives
Degloving Injuries in Children

- Shock is common
- Vital signs
- Thinner skin
- Do not resist forces
- Rapid healing
- Short term outcomes satisfactory
- Long term outcomes will emerge
- Functional sequelae possible

Development of Deformity and Dysfunction

- Achilles tendon contracture
- Treatment period too long
- Ankle immobilization
- Scar contracture
- Heel skin grafting
- Weight-bearing area
- Graft placement
- Abnormal gait

Controversies

- Compartment syndrome
- Degloved skin is dead
- Amputation
- Angiosomes
- Attinger et al.

THANK YOU FOR YOUR TIME & ATTENTION
ANY QUESTIONS?
References


