Surgery of the Foot Pad

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Surgery of the Foot Pad

General Considerations

✓ Pad Laceration / Lesions
✓ Skin Grafting of the foot
✓ Fusion Podoplasty
✓ Pad Grafting
General Considerations

Canine Foot Pads Include:

1. Digital pad
2. Metacarpal / metatarsal pads

Thickness

1. Epidermis evolutionized for weight bearing (45x thickness haired skin)
2. Pad cushion is designed for impact
General Considerations

Loss of digital pads
- Limb function is generally preserved (dependent upon the # of pads affected)
- Consideration for metacarpal / tarsal pad advancement

Loss of metacarpal / metatarsal pad can be problematic
- Reconstruction is achieved by Phalangeal Fillet Technique

Loss of all foot pads is catastrophic
- Amputation
- Limb prosthetic
  - Endoprostheses
  - Orthotic brace
Sterility

“Prevention is Superior to Treatment”

✓ Sterile technique
✓ Copious lavage (if appropriate)
✓ Minimize tissue trauma
✓ Minimize anesthetic time
Antimicrobial Prophylaxis

• **Principles**
  – *Staphylococcus* sp. most common
    • 1<sup>st</sup> gen cephalosporine
  – **Maximum tissue conc at time of incision**
    • 30 min prior incision
    • Administered every 90-120 minutes until closure
  – In humans antibiotics given > 24 hr ineffective
  – Pre-op antibiotics >3-5 hours may select for resistance
Antimicrobial Prophylaxis

“Prevention is Superior to Treatment”

• Indications
  – Surgery time > 90 min
  – Host systemic factors
  – Intraoperative contamination
  – Local soft tissue trauma and surgical technique
Pad Lesions
Digital Corn
Digital Corn
Pad Lesions and Lacerations
Phalangeal Fillet Technique
Phalangeal Fillet Technique
(Digital Pad Transfer)

Metatarsal pad MCT

Metacarpal pad Sarcoma
Phalangeal Fillet Technique
( Direct flap for primary wound closure)
PAD GRAFTING OPTIONS

- Plug
- Entire Pad
- Delayed, Distant Transfer
- Microvascular Surgery
Wire Snare of the Rear Paw
Direct Flap Transfer

- Pad Graft Prep
- Graft Application to Lateral Abdominal Wall
- Placement of Injured Foot Beneath Bipedicle Flap
- Staged Division of Flap Pedicles
- Prolonged Protection
Pad Graft Preparation and Placement on the Lateral Abdominal Wall
Tie-over Dressing
Bipedicle Flap: Direct Flap Transfer
Epithelial Cell Proliferation Beneath the Corneal Pad Layer
A Few Months Later...
Podoplasty
Podoplasty (Podofusion)
Podoplasty (Podofusion)
Reconstruction

Other Consideration

– Medication assistance
  • Trazodone (*Serotonin re-uptake inhibitor*)
  • Dexmedetomididine (*alpha-two adrenergic agonist*)

– Custom Boot Splint
  • Vetcast Plus ™
Thank you!

Questions?