



“Case Histories To Ponder”

Difficult wounds in the diabetic foot


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NZWC CONFERENCE 2019



Case 1

- 79 year old male (HbA_{1c} 63)
 - Type 2 diabetes
 - Hypothyroidism
 - Obesity
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Presentation + History

- Non healing left foot ulcers
- Duration - 5 months
- R # Femur 6 months ago
- Altered gait
 - overloading L foot?
- Previous skin graft
 - melanoma excision 7yrs prior



Assessment + Investigations

- PT pulses palpable
- Patchy sensory neuropathy
- Suspicious Lesion
- Firm, raised nodule
- 12 mm diameter
- Urgent biopsy
- SCC or Amelanotic MM?



Management


Malignant melanoma

- Wide excision
- Split skin graft
- CT Scan no metastasis
- Offloading Shoe/Orthotic





Case 2

- 70 year old female
 - Type 2 diabetes (HbA_{1c} 7.0)
 - Fijian Indian, no English
 - Hypertension
 - Elevated BMI
- 


Presentation + History

- Discharging sinus, 4 months duration
- Probed to 3cm but not bone, serous exudate
- Multiple courses antibiotics
- No improvement
- Painful at times
- Nil injury history





Assessment + Investigations

- DP and PT pulses palpable
 - Mild sensation loss
 - Deep swabs
 - X-ray
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Results

- Culture – Staph Epidermidis
- X-ray unremarkable for OM or RO FB
- Suspicious of a hidden FB or RL FB?
- Deep collection?



MRI

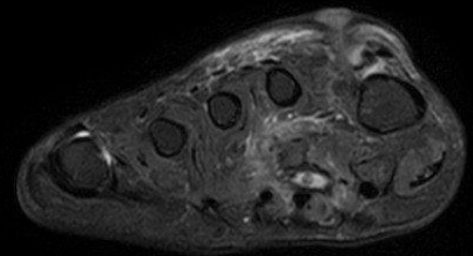
Sinus tract extending into plantar foot

Small collection, no osteomyelitis

Linear shaped FB


No sinus to plantar skin seen

REFERRED ORTHOPAEDICS





Results

- Two small metal fragments removed from entrance to sinus
 - Each measuring approximately 3 x 2mm
 - Shiny opaque surfaces
 - Aluminium fragments?
- 


Results





Management

Improvement noted but still not healed completely

- Broad spectrum antibiotics
 - Optimise blood glucose control
 - Open footwear
 - Awaiting orthopaedic appointment - exploratory surgery
- debridement
- 



Case 3

51 year old female

Type 2 diabetes (HbA1c 46)

Obesity BMI 45

Cauda Equina syndrome (2003)-lumbar herniated disc

Discectomy L 4-5

Peripheral neuropathy and L foot drop



Presentation + History

- Non healing ulcer, 3 months duration
- Pus draining from ulcer
- Ulcer communicating to sinus tract
- Covered with thick callous
- Probed to 2 cm
- No history of injury




Presentation





Assessment + Investigations

- Foot pulses easily palpable
 - Severe Peripheral neuropathy
 - Referred x-ray, radio-opaque FB?
 - Deep swabs of sinus tract
 - Prescribed Augmentin
- 



Results

- X-ray unremarkable
 - Wound responded well to antibiotics and debridement
 - Bacteria cultured sensitive to Augmentin
-but then deteriorated again



Cause


Undrained collection? radiolucent FB?

Consider USS or MRI?



Management

- Frequent debridement
- Off loading footwear
- Regular dressings by D/N



Careful exploration of sinus with probe

Management

- White soft tissue tubular structure removed from sinus - sent to pathology
- Inflamed epidermal **inclusion cyst**




Healed Wound

- Healed after 3 weeks
- No recurrence on F/U






Case 4

- 66 year Cook Island male
 - Type 2 diabetes
 - ESRF – Haemodialysis
 - Peripheral neuropathy
 - Obesity
 - Gout
 - Right forefoot amputation with skin graft
- 



Presentation + History


- Large exophytic, verruca - like mass over stump
 - Had been present for 6 months plus, not painful
 - Highly exudating, malodorous
 - Treated with antibiotics by GP
 - Afebrile, no cellulitis
- 

Presentation





Assessment + Investigations


- Deep swabs – polymicrobial
 - Punch biopsy – inconclusive, Hypergranulosis, epithelial hyperplasia
 - X-ray - no osteomyelitis
 - Clinical diagnosis – possible **Verrucous hyperplasia**
 - Differential Dx – Verrucous carcinoma
 - Refer MDT - orthopaedics
- 

X-Ray





Initial Management


- Lower bacterial burden of lesion
 - a) Antibiotics (Augmentin and Ciprofloxacin)
 - b) Iodosorb, absorptive secondary dressings
 - Debridement (difficult due to bleeding)
 - Compression bandaging and offloading
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Conservative Management






Management Options

- Patient refused surgical intervention
 - Wife also having dialysis - difficulty in driving
 - Fearful of major amputation
 - Did eventually consent to surgery
- 



Surgical Management

- Excision of Verrucous hyperplasia
 - Pathology report - **Benign Verrucous Hyperplasia** with superimposed chronic infection
 - Bone trimming of medial cuneiform
 - Achilles tendon lengthening
 - Serial casting
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Management - TCC



Management – Post surgical



Healing Wound




Healed Wound

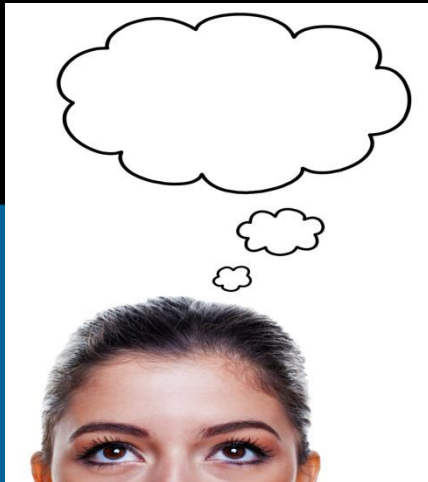




Verrucous hyperplasia

- Cause unknown
 - Possibly chronic infection, friction, chronic irritation?
 - Oedema especially of stump amputations?
 - More common after grafting?
 - Well documented in oral surgery/dermatology literature
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Take home message





Take home message

Reasons for non-healing DFU include:

- PVD?
 - Deep Infection?
 - Pressure combined with neuropathy?
 - Biofilm?
 - FB?
 - Oedema?
 - Cancerous change?
 - Autoimmune, Vasculitic ulcers?
 - Immuno-suppressive /cytotoxic medication?
 - Poor blood glucose control
 - Smoking.....Other?
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Avoid Complacency




Embrace Challenges





Question

Which health professional is best suited to manage diabetic foot wounds?



Answer All of them!

Multidisciplinary Team



Thank You!



This is my Back to School face!