Prevention and Management of Diabetes Related Foot Problems
The Law According to NICE

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Diabetic foot problems: prevention and management

NICE guideline
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nice.org.uk/guidance/ng19
Writing the Guideline

• Guidelines Group
  – Clinical experts
  – Patient representatives
  – National Institute for Health and Care Excellence (NICE) members

• Reviewing evidence
Care Across all Settings

- Training and competency
- Special arrangements for people with disabilities
- Integrated pathways
  - Screening
  - Foot Protection Service
  - Multidisciplinary Foot Service
  - Orthoses and footwear
Key Priorities for Implementation

- Care within 24 hours of a person being admitted to hospital
- Care across all care settings
- Assessing the risk of developing a diabetic foot problem
- Diabetic foot problems
- Diabetic foot infection
- Charcot arthropathy
Assessing the risk

- Children under 12
  - Basic foot care advice

- Young people 12-17
  - Annual assessment

- Adults
  - On diagnosis
  - Annually
  - Admission to hospital or change in status

- Neuropathy
- Limb Ischaemia
- Ulceration
- Callus
- Infection/inflammation
- Deformity
- Gangrene
- Charcot
Diabetic Foot Problems

- **Low risk (0 risk factors)**
  - Annual foot assessment and education

- **Moderate (1 risk factor)**
  - Referred to Foot Protection Service, for new patient assessment in 6-8 weeks
  - Follow up 3-6 months

- **High (2+ risk factors)**
  - Refer to Foot Protection Service, for new patient assessment within 2-4 weeks
  - Follow up 1-2 months no immediate concern
  - 1-2 weeks immediate concern (picture)
Active Diabetic Foot Problems

• Refer people with active diabetic foot problems with 1 working day to the Foot Protection Service or Multidisciplinary Foot Service according to local protocols and pathways

• Triaged within 1 further working day

• Remember the undiagnosed increased risk of cardiovascular disease
Limb and Life Threatening

Immediate referral to acute services for limb or life threatening diabetic foot problems
Hospital Acquired Ulceration

All moderate and high risk patients are given pressure redistribution devices

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients who developed a foot lesion during their admission</td>
<td>2.2% (257)</td>
<td>N/A</td>
<td>1.6% (210)</td>
<td>1.4% (196)</td>
</tr>
</tbody>
</table>

Texas Classification

Grade/Depth
“How deep is the wound?”

<table>
<thead>
<tr>
<th>Stage/Comorbidities</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>pre- or post ulcerative lesion completely epithelialised</td>
<td>Pre-or post ulcerative lesion completely epithelialised</td>
<td>Superficial wound not involving tendon, capsule or bone</td>
<td>Wound penetrating to tendon or capsule</td>
<td>Wound penetrating to bone or joint</td>
</tr>
<tr>
<td>With infection</td>
<td>With infection</td>
<td>With infection</td>
<td>With infection</td>
<td>With infection</td>
</tr>
<tr>
<td>With ischemia</td>
<td>With ischemia</td>
<td>With ischemia</td>
<td>With ischemia</td>
<td>With ischemia</td>
</tr>
<tr>
<td>With infection and ischemia</td>
<td>With infection and ischemia</td>
<td>With infection and ischemia</td>
<td>With infection and ischemia</td>
<td>With infection and ischemia</td>
</tr>
</tbody>
</table>
SINBAD Classification

<table>
<thead>
<tr>
<th>SINBAD SCORING for Index Ulcer:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Please tick (✓) yes or no on each line</td>
<td></td>
</tr>
<tr>
<td>Site= Index Ulcer Hindfoot</td>
<td>No</td>
</tr>
<tr>
<td>Ischaemia: Clinical PAD?</td>
<td>No</td>
</tr>
<tr>
<td>Neuropathy: Sensory loss?</td>
<td>No</td>
</tr>
<tr>
<td>Bacterial infection: Clinical?</td>
<td>No</td>
</tr>
<tr>
<td>Area: 1cm$^2$ or more?</td>
<td>No</td>
</tr>
<tr>
<td>Depth: to tendon or bone?</td>
<td>No</td>
</tr>
</tbody>
</table>
Diabetic Foot Ulcer Management

- Metabolic Control
- Infection
- Education
- Ulceration
- Offloading
- Wound Control
- Vascular Control
Diabetic Foot Infection

- Use soft tissue or bone samples from the base of a debrided wound
- Locally developed antibiotic guidelines
- Consider osteomyelitis
- X-ray
- Consider MRI if x-ray inconclusive
# The Foot Formulary

## Norfolk and Norwich University Hospitals

**Quick Reference Guideline Table 2: Antibiotic Management of Diabetes Related Foot Infections in Adults**

<table>
<thead>
<tr>
<th></th>
<th><strong>FIRST CHOICE</strong></th>
<th><strong>PENICILLIN ALLERGY</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>PARTIAL OR FULL THICKNESS</strong></td>
<td><strong>EXTENDING TO UNDERLYING SOFT TISSUE/BONE</strong></td>
</tr>
<tr>
<td><strong>MILD</strong></td>
<td>Co-amoxiclav 625mg tds PO</td>
<td>Co-amoxiclav 625mg tds PO</td>
</tr>
<tr>
<td><strong>MODERATE</strong></td>
<td>Co-amoxiclav 625mgs tds PO</td>
<td>Co-amoxiclav 625mgs tds PO +/- Ciprofloxacin 500mgs qds PO</td>
</tr>
<tr>
<td><strong>SEVERE BORDERLINE ADMISSION</strong></td>
<td>Ceftriaxone 1-2g od IM* (see notes below re IM administration) Ciprofloxacin 500mgs bd PO Metronidazole 400mgs tds PO</td>
<td>Ceftriaxone 1-2g od IM* (see notes below re IM administration) Ciprofloxacin 500mgs bd PO Metronidazole 400mgs tds PO</td>
</tr>
<tr>
<td><strong>SEVERE NEEDS ADMISSION</strong></td>
<td>Tazocin 4.5g tds IV</td>
<td>Clarithromycin 500mg bd IV Metronidazole 400mgs tds PO Cefazidime 1g tds IV (2g tds IV if very severe). Substitute with Ciprofloxacin 500mgs bd PO in true penicillin allergy. (see guidance note 1)</td>
</tr>
</tbody>
</table>

*IM antibiotics should only be given where there are appropriate facilities available to treat anaphylaxis. Ceftriaxone 2g IM should be given as two separate 1g injections in different sites.

*If patient is MRSA positive then prescribe according to sensitivities (combination of 2 of the following oral antibiotics, doxycycline, trimethoprim, rifampicin, fusidic acid (but do not use fusidic acid in combination with rifampicin). Discuss with a Medical Microbiologist on 4688 if sensitivities not available. Co-amoxiclav may cause chlosteral jaundice if use is prolonged, especially in patients over 65 years. If treatment continues over 2 weeks liver function tests (LFTs) should be carried out. Chlosteral jaundice may occur up to 6 weeks after treatment is stopped.

Charcot Arthropathy

- Simple fractures can progress to CA
- Suspect CA redness, warmth, swelling and/or deformity with or without pain
- Advise or arrange for non-weight bearing until assessment by MDFS
- Treat with a non-removable off-loading device
- Monitor temperature, serial x-rays
Challenges of Implementation

• Resources
  – Capacity of Foot Protection Service & Multidisciplinary Foot Service
  – Waiting times

• Integration
  – Effective and timely communication
  – Agreeing local pathways and policies
  – Centralisation of vascular services

• Training & Competency
  – Staff turnover, recruitment
  – Backfill for training
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