Multisciplinary Team and Diabetic Foot Syndrome

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Disclosure

Speaker name:
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I have the following potential conflicts of interest to report:

☑  Consulting
☐  Employment in industry
☐  Stockholder of a healthcare company
☐  Owner of a healthcare company
☐  Other(s)

☐  I do not have any potential conflict of interest
Patient Characteristics

65 years old, male
Active smoker
Type 1 Diabetes Mellitus
Hypertension
Retinopathy
Carotid stenosis
Right achilles tendon reconstruction (1996)
Patient Characteristics

2013 PTA and stenting external iliac bilateral (with bilateral chronic chronic occlusion of the SFA) carried out in another hospital

*Anaphylactic shock* immediately after injection of an intravenous nonionic contrast medium

*November 2017 left heel ulcer that in the last 10 days became infected (fever, WCC 18.000, hypotension, cellulitis > 2 cm, bad odour)*
IDSA 2012: Severe Infection + CLI

- TcPO2 peri: 17 mmHg
- No pulses
- Rest pain

PTB +
Influence of Osteomyelitis Location in the Foot of Diabetic Patients With Transtibial Amputation

Ezio Faglia, MD¹, Giacomo Clerici, MD¹, Maurizio Caminiti, MD¹, Vincenzo Curci, MD¹, and Francesco Somalvico, PhD¹

Table 4. Initial and Definitive Surgical Intervention in Study Population

<table>
<thead>
<tr>
<th>Osteomyelitis Site</th>
<th>Level of Initial Amputation</th>
<th>Transtibial Amputation Outcome</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forefoot (n = 300)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toe</td>
<td>136</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Ray</td>
<td>164</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Midfoot (n = 27)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transmetatarsal</td>
<td>19</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Lisfranc</td>
<td>3</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Chopart</td>
<td>4</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Heel (n = 23)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partial calcanection</td>
<td>17</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Primary transtibial amputation</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

χ² = 128.4, P < .001
**Table 2. Infectious Diseases Society of America and International Working Group on the Diabetic Foot Classifications of Diabetic Foot Infection**

<table>
<thead>
<tr>
<th>Clinical Manifestation of Infection</th>
<th>PEDIS Grade</th>
<th>IDSA Infection Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>No symptoms or signs of infection</td>
<td>1</td>
<td>Uninfected</td>
</tr>
</tbody>
</table>

Infection present, as defined by the presence of at least 2 of the following items:
- Local swelling or induration
- Erythema
- Local tenderness or pain
- Local warmth
- Purulent discharge (thick, opaque to white or sanguineous secretion)

| Local infection involving only the skin and the subcutaneous tissue (without involvement of deeper tissues and without systemic signs as described below). If erythema, must be >0.5 cm to ≤2 cm around the ulcer. | 2 | Mild |
| Excluding other causes of an inflammatory response of the skin (e.g., trauma, gout, acute Charcot neuro-osteoarthropathy, fracture, thrombosis, venous stasis). | |
| Local infection (as described above) with erythema > 2 cm, or involving structures deeper than skin and subcutaneous tissues (e.g., abscess, osteomyelitis, septic arthritis, fasciitis), and | 3 | Moderate |

- No systemic inflammatory response signs (as described below).

| Local infection (as described above) with the signs of SIRS, as manifested by ≥2 of the following: | 4 | Severe |
| - Temperature >38°C or <36°C  
- Heart rate >90 beats/min  
- Respiratory rate >20 breaths/min or PaCO₂ <32 mm Hg  
- White blood cell count >12,000 or <4000 cells/μL or >10% immature (band) forms |
Prompt drainage of infection with or without partial foot amputation takes priority over revascularization.

<table>
<thead>
<tr>
<th>Class</th>
<th>Description</th>
<th>Potential Risk for High Level Amputation</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV</td>
<td>Emergent Procedure performed to limit progression of acute infection</td>
<td>Very Low</td>
</tr>
<tr>
<td>III</td>
<td>Curative Procedure performed to assist in healing open wound</td>
<td>Low</td>
</tr>
<tr>
<td>II</td>
<td>Prophylactic Procedure performed to reduce risk of ulceration or reulceration in person with loss of protective sensation but without open wound</td>
<td>Moderate</td>
</tr>
<tr>
<td>I</td>
<td>Elective Procedure performed to alleviate pain or limitation of motion in person without loss of protective sensation</td>
<td>High</td>
</tr>
</tbody>
</table>
Revascularization:

When?

"If insufficient blood flow to the extremities impairs delivery of antibiotics or oxygen, revascularization should be done as soon as possible."
Who have been involved

Diabetologist/Foot specialist (first assessment)
Foot Surgeon (Urgent Surgical Debrident)
Interventional Cardiologist/Radiologist (Revascularization)
Anesthesiologist (anaphylactic shock)
Orthopedic Technician (offloading)
Nurses (Wound Care Specialist)
Who have been involved

Diabetologist/Foot specialist (first assessment)

Foot Surgeon (Urgent Surgical Debrident)

Interventional Cardiologist/Radiologist (Revascularization)

Anesthesiologist (anaphylactic shock)

Orthopedic Technician (offloading)

Nurses (Wound Care Specialist)
9. Diabetic foot care teams can include (or should readily access) specialists in various fields; patients with a DFI may especially benefit from consultation with an infectious disease or clinical microbiology specialist and a surgeon with experience and interest in managing DFIs (strong, low).

10. Clinicians without adequate training in wound debridement should seek consultation from those more qualified for this task, especially when extensive procedures are required (strong, low).
Who have been involved

Diabetologist/Foot specialist (first assessment)
Foot Surgeon (Urgent Surgical Debrident)
Interventional Cardiologist/Radiologist (Revascularization)
Anesthesiologist (anaphylactic shock)
Orthopedic Technician (offloading)
Nurses (Wound Care Specialist)
Who have been involved

Underestimated & Overlooked treatment!
Who will be involved: next step

Diabetologist/Foot specialist (first assessment)
Foot/Plastic Surgeon (Foot Reconstruction)
Interventional Cardiologist/Radiologist (Revascularization)
Anesthesiologist (anaphylactic shock)
Orthopedic Technician (offloading)
Foot Reconstruction: Functional Limb
Foot Reconstruction: Functional Limb
Foot Reconstruction: Functional Limb

February 2018

July 2018
By reviewing 19 compatible studies on incidence rates for ulcer recurrence, we estimate that roughly **40% of patients have a recurrence within 1 year** after ulcer healing, almost **60% within 3 years**, and **65% within 5 years**.
Foot Reconstruction: Functional Limb
6. REMISSION

6. To prevent a recurrent plantar foot ulcer in a at-risk patient with diabetes, prescribe therapeutic footwear that has a demonstrated plantar pressure relieving effect during walking (i.e. 30% relief compared to plantar pressure in a standard of care therapeutic footwear) and encourage the patient to wear this footwear. (Strong; Moderate)
Hospital Stay: How Many Days?

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Thank you

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