DIABETIC FOOT

SCOPE OF THE PROBLEM

Hanan Gawish, Mansoura University
Egypt Representative of the IWGDF
Agenda

• Definition of DF
• Diabetic Foot among Diabetes complication
• Risk factors for amputation
• Risk Categorization
• Prevention of amputation
• Barriers / Some suggested solutions
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DF Definition

The foot of a diabetic patient that has the potential risk of pathologic consequences including infection, ulceration and or destruction of deep tissues associated with neurologic abnormalities, various degrees of peripheral vascular disease and/or metabolic complications of diabetes in the lower limb.

WHO definition
DF Definition

Any foot pathology that results directly from diabetes or its long-term complications

(Boulton 2002), Diabetes, 30 : 36, 2002.
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DF among other Diabetic Complications

- Fundus Exam for Diabetic retinopathy
- Microalbuminuria for Diabetic Nephropathy
- Annual screening for DF!!

Low Tech High touch
Easiest to detect
Truly Preventative
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Risk Factors for Amputation

- Amputation
- Infection
- Trauma
- PAD
- Deformity
- Peripheral Neuropathy
Risk Factors for Amputation

Amputation

- Infection
- Trauma
- PAD
- Deformity

Peripheral Neuropathy
Peripheral Neuropathy

- Variable prevalence according to the diagnosis; based on ?? symptoms, signs, tuning fork, monofilament or nerve conduction studies
- Neuropathy related to 50-75% of non traumatic amputation
- Physicians miss the diagnosis of DPN in 61% of patients
- Management of Neuropathy/ Beyond Pains
Screening for Neuropathy
Risk Factors for Amputation

- Amputation
- Trauma
- Infection
- PAD
- Peripheral Neuropathy
- Deformity
Foot Deformity
Plantar Pressure Assessment
Risk Factors for Amputation

- Amputation
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Risk Factors for Amputation

- Amputation
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- Deformity
- Peripheral Neuropathy
Trauma

- Intrinsic: Deformity / Callus
- Extrinsic: Poor Footwear/ foreign bodies inside the shoes/ Previous surgery
- Behavioral:
  Changing the Level of activity
Risk Factors for Amputation

Amputation

Infection

Trauma

PAD

Deformity

Peripheral Neuropathy

63% DFU
Risk Factors for Amputation

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Risk Factors for Amputation

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- PAD
Diabetics have 2-5 fold increase in PAD

- Younger age
- Loss of female protection
- Different presentation
- Different anatomical distribution/ less collaterals
Risk Factors for Amputation

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Risk Factors for Amputation

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- PAD
The germ is nothing. It is the terrain in which it is found that is everything

Infection

- Common serious complication of Diabetics

- Proper clinical assessment allow prompt management
Risk Factors for Amputation

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- Peripheral Neuropathy
Risk Factors for Amputation

- Trauma
- Deformity
- PAD
- Infection
- Peripheral Neuropathy
Amputation never solves the problem

<table>
<thead>
<tr>
<th></th>
<th>1 yr</th>
<th>3 yrs</th>
<th>5 yrs</th>
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<tbody>
<tr>
<td>Re-ulceration:</td>
<td>34%</td>
<td>61%</td>
<td>70%</td>
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<tr>
<td>Primary healing</td>
<td></td>
<td></td>
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<tr>
<td>Amputation:</td>
<td>3%</td>
<td>10%</td>
<td>12%</td>
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<tr>
<td>Mortality:</td>
<td>8%</td>
<td>27%</td>
<td>42%</td>
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<tr>
<td>Healing with amputation</td>
<td>13%</td>
<td>35%</td>
<td>48%</td>
</tr>
<tr>
<td>Amputation:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mortality:</td>
<td>20%</td>
<td>41%</td>
<td>73%</td>
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</tbody>
</table>

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<table>
<thead>
<tr>
<th>Category</th>
<th>Risk profile</th>
<th>Check up frequency</th>
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<tbody>
<tr>
<td>0</td>
<td>No sensory neuropathy</td>
<td>Once a year</td>
</tr>
<tr>
<td>1</td>
<td>Sensory neuropathy (DN)</td>
<td>Once/ 6 month</td>
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<tr>
<td>2</td>
<td>DN and PAD and/or foot deformities</td>
<td>Once /3 month</td>
</tr>
<tr>
<td>3</td>
<td>Previous ulcer/Amputation</td>
<td>Once 1 month</td>
</tr>
</tbody>
</table>
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• Definition of DF
• Diabetic Foot among other DF complication
• Risk factors for amputation
• Risk Categorization
• Prevention of amputation
• Barriers against Foot care implementation
ABC (1-2-3) of the DF team:

- Education of patients and health care providers
- Regular check up and identification of the foot at risk
- Prompt intervention for active foot problems, including ulcers, infection, Charcot and ischemia
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Barriers against implementation of DF program/ how to overcome?

- Structural Health care system and referral guidelines/ Meetings/ Medical recording system
- Multidisciplinary Team/ Done
- Lack of time/ Specialist foot team
- Podiatrist/ DFCA
- Orthotist and scarce orthotics
Thank you