STANDARD TREATMENT WORKFLOW (STW)

Diabetic Foot

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Singh R, et al.: Diabetic Foot

Standard Treatment Workflow (STW)

**DIABETIC FOOT**

ICD-10: Z86.31

**EVALUATION OF PATIENT WITH DIABETIC FOOT**

A. General condition

1. Vital signs
2. Glycemic control – FBS, PPBS regularly, HbA1c once in 6 months

B. Local examination

Check both feet for the below mentioned conditions

1. **ULCER**
   - See for open infected wound
   - Check for osteomyelitis with baddide probe-to-bone test or an X-ray

   If osteomyelitis not suspected:
   - Do moist dressings
   - Achieve good glycemic control
   - Offload the foot

   If osteomyelitis is suspected:
   - Refer to higher centre for further management

   Also refer to higher centre with facilities for:
   - Surgical debridement of wounds with necrotic tissue
   - Cellulitis needing fasciectomy
   - Wet gangrene needing amputation
   - Cases needing negative pressure wound therapy

2. **PERIPHERAL ARTERY DISEASE (PAD)**
   - History of intermittent claudication
   - Absent pulsations in posterior tibial artery and dorsalis pedis artery
   - Ankle brachial index < 0.9

   Refer to higher centre for further evaluation and consideration for revascularisation

3. **LOSS OF PROTECTIVE SENSATIONS (LOPS)**
   - Neuropathy loss of protective sensations (ULPs)
   - History of tingling, numbness, "feels like walking on mattress"

   Check for foot sensation using 10gm monofilament

   If sensations are absent and patient is asymptomatic, then educate the patient, advise protective footwear, and call for regular follow up as per risk category

4. **DEFORMITIES**
   - Structural foot deformity
   - Look for gross deformities like hammertoe
   - Claw toe
   - Hallux valgus
   - Pes cavus
   - rocker bottom foot

   Refer to higher centre

**PREdisposing FACTORS FOR DIABETIC FOOT ULCER**

- Older age
- Uncontrolled hyperglycemia
- Duration of diabetes mellitus
- Peripheral artery disease
- Visual impairment
- Chronic kidney disease

**RISK ASSESSMENT & FREQUENCY OF FOLLOW UP**

<table>
<thead>
<tr>
<th>Risk category</th>
<th>Parameters</th>
<th>Follow up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Cellulitis alone, No LOPS, No PAD</td>
<td>Once a year</td>
</tr>
<tr>
<td>Medium</td>
<td>Deformity with LOPS or PAD</td>
<td>In 6 months</td>
</tr>
<tr>
<td>High</td>
<td>Previous amputation or ulceration &amp; any two of - deformity, LOPS, PAD</td>
<td>In 3 months</td>
</tr>
</tbody>
</table>

**WOUND CARE**

**DO:**
- Moist dressings
- Change dressings daily for dirty wounds and on alternate days for clean wounds

**DON'T USE:**
- Hydrogen peroxide, EUSOL, povidone iodine, chlorhexidine etc.
- Hyperbaric oxygen, antimicrobial dressings and cerimall therapy has insufficient evidence to be recommended

**INFECTION AND ANTIBIOTIC GUIDANCE**

(Note: Antibiotics are insufficient unless combined with appropriate wound care)

**NON INFECTED WOUND**

No antibiotics

**MILD INFECTION**

- At least two of:
  - Swelling/induration
  - Pain/tenderness (0.5-2cm)
  - Purulent discharge

- Give oral antibiotics for 1-2 weeks
  - (Target only aerobic gram-positive cocci)

**MODERATE INFECTION**

- Redness
- Deep tissues affected (abscess, osteomyelitis, fasciitis, sccopic arthritis)
- No systemic signs

**SEVERE INFECTION**

- Local findings + systemic findings of SIRS (at least two of):
  - Temperature >38°C or <36°C
  - Heart rate >90/min
  - Respiratory rate > 20/min or PaCO2 >32 mm Hg
  - WBC >12000 or <4000 or immature bands >10%

**MANAGEMENT OF OTHER RELATED FOOT CONDITIONS / COMPLICATIONS**

**Corns/callusity**

- Scaling in QPD
- Footwear modification

- Web space fungal infection
- Topical antifungals
- Maintain local hygiene

- In-growing toe nails
- Regular nail trimming

- Charcot’s foot
- Refer to higher centre

**PATIENT EDUCATION**

**DO:**
- Daily self inspection of foot
- Wear comfortable, proper fitting footwear
- Cut toe nails straight
- Keep blood sugars controlled
- Regular foot check up with your doctor

**DON'T:**
- Walk barefoot, even at home
- Remove calluses/ corns from home
- Smoking: delays healing

**ABBREVIATIONS**

- EUSOL: Edinburgh university solution of lime
- FBS: Fasting blood sugar
- LOPS: Diabetic peripheral neuropathy with loss of protective sensation
- PAD: Peripheral arterial disease
- PPBS: Post prandial blood sugar
- SIRS: Systemic inflammatory response syndrome

**ALWAYS KEEP A LOW THRESHOLD FOR REFERRAL TO HIGHER CENTRE**

This STW has been prepared by national experts of India in consultation for the guidelines of healthcare system in the country. These broad guidelines are advisory and are not based on expert opinion and are available in specific evidence. These may be variations in the management of an individual patient’s condition, as decided by the treating physician. There will be no indemnity for direct or indirect consequences. Kindly visit the website of DMI for more information. dharm.org.in for more information.

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