DANISH HEALTH AUTHORITY

NATIONAL CLINICAL GUIDELINE FOR THE ASSESSMENT AND TREATMENT OF DIABETIC FOOT ULCERS

2016

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Quick guide

Assessment	
	It is recommended to use a systematic classification method, e.g., the Wagner classification, in the assessment of a diabetic foot ulcer (⊕⊕⊕⊕).
	It is recommended to assess any person with diabetes and a foot ulcer clinically for infection of the foot ulcer (⊕⊕○○).
	It is recommended to always consider the possibility of a deep infection in soft tissue (e.g., abscess) or bone infection in infected diabetic foot ulcers (⊕⊕⊕○).
	Microbiological examination of diabetic foot ulcers is recommended if infection is suspected. Either based on an ulcer biopsy or, if that is not possible, a swab preceded by washing with water (⊕⊕○○).
	It is not recommended to base diagnostics of infection solely on blood test (⊕⊕○○).
	It is recommended to assess any person with a diabetic foot ulcer for neuropathy by monofilament examination or by biothesiometry (⊕⊕○○).
	It is recommended to assess any person with a diabetic foot ulcer for peripheral arterial insufficiency by palpation of the peripheral pulses (⊕⊕⊕○), (⊕⊕○○).
	It is recommended to use conventional X-ray examination 1) in case of lack of clinical improvement in spite of treatment 2) if bone infection or deformities are suspected or 3) to rule out the most important differential diagnoses (⊕⊕⊕○), (⊕⊕○○).
	It may be considered to perform an MRI if deep infection is suspected and ulcer biopsy and X-rays are inconclusive (⊕⊕○○), (⊕⊕⊕○).
Referral	
	It is recommended to refer patients with affected general condition, suspected critical ischaemia, wet gangrene or plantar abscess for acute assessment and treatment at the nearest acute hospital (⊕⊕○○).
	It is recommended to refer any person with an infected diabetic foot ulcer, following initiation of antibiotic treatment, to a multidisciplinary team (MDT) the next working day (sub-acute referral) (⊕⊕⊕○), (⊕⊕○○).
	It is recommended to refer any person with a complicated diabetic foot ulcer for further assessment and treatment in an MDT the next working day (⊕⊕⊕○), (⊕⊕○○).
√	It is recommended to ensure that imaging does not delay the referral to an MDT
√	It is recommended to refer any person with an uncomplicated diabetic foot ulcer to an MDT specialised in the assessment and treatment of diabetic foot ulcers, if the initial treatment does not result in significant clinical improvement of the foot ulcer within 2 to 3 weeks (⊕⊕○○).

National clinical guideline for the assessment and treatment of diabetic foot ulcers
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Treatment of diabetic foot ulcers	
√	It is recommended to offer active ulcer care to any person with a diabetic foot ulcer.
	It is recommended that each healthcare professional selects an ulcer revision method of which he or she is an experienced user, and to which the patient is able to contribute (⊕⊕○○).
	It is recommended that each healthcare professional selects his or her preferred ulcer care product among products tolerated by the patient, and aiming at lowering the cost (⊕⊕○○).
√	It is recommended to document the ulcer appearance and size continuously by, e.g., measuring and/or taking photos following ulcer revision.
√	In patients with diabetic foot ulcers and with signs of infection it is recommended to initiate antibiotic treatment, according to local guidelines, immediately after ulcer biopsy/swab and without awaiting the results of cultivation and determination of resistance (⊕⊕○○).
	It is recommended to select the antibiotics, route of administration and duration based on the patient's renal and hepatic function, the seriousness of the infection and (until the results of cultivation and determination of resistance are available) on knowledge of the most frequently isolated pathogenic bacteria (⊕⊕○○).
	It is recommended to adjust the antibiotic treatment upon receipt of the results of cultivation and determination of resistance (⊕⊕○○).
√	Topical antibiotic treatment of diabetic foot ulcers is not recommended (⊕⊕○○).
	Antibiotic treatment is not recommended if there are no clinical signs of infection or clinically significant bacterial growth based on a swab (⊕⊕○○).
	It is recommended to include microbiologists in establishing local guidelines for antibiotic treatment of diabetic foot ulcers (⊕⊕○○).
√	It is recommended to ensure glycaemic control and control of the patient's other risk factors in parallel with controlling the patient's diabetic foot ulcer and to intensify the control if needed.
	It is recommended to offer external help to patients with diabetic foot ulcers based on local experience and competencies, an individual assessment as well as price considerations (⊕⊕⊕⊕), (⊕⊕○○).
	It is recommended to only offer advanced ulcer care such as topical negative pressure (TNP) (⊕⊕○○), hyperbaric oxygen therapy (HBOT) (⊕⊕⊕○), use of granulocyte stimulating factor (GsF) (⊕⊕⊕○) or platelet derived growth factor (PDGF) as part of protocolled studies (⊕⊕○○).
	It is recommended that ending treatment of the patient in an MDT should only take place after explicit agreement with the responsible healthcare professional in the primary sector describing the plan for antibiotic treatment, wound care, pressure offloading and responsibilities (⊕⊕○○).
Continuing care	
	It is recommended to regularly check for new ulcers in patients with previous diabetic foot ulcers (⊕⊕○○).
	It is recommended, as a minimum, to include patient education, foot examination of both feet as well as assessment of any worsening of risk factors in the check-up (⊕⊕○○).
	It is recommended to maintain and strengthen the patient's level of functioning during and after immobilisation, according to an individual assessment and considering the need for external help (if any) (⊕⊕○○).

Involvement of the patient and relatives	
√	It is recommended to offer an individualised training course focusing on prevention and self-care to patients with diabetic foot ulcers.
√	It is recommended that the relatives – by agreement with the patient – be involved in treatment and prevention.

About the quick guide

This quick guide contains the key recommendations from the national clinical guideline for the assessment and treatment of diabetic foot ulcers. The guideline was prepared by the DHA.

Thus, the guideline contains recommendations for selected parts of the field only and therefore must be seen alongside the other guidelines, process descriptions etc. in this field.

The strength of the evidence, on which the recommendations are based, is shown in parenthesis following each recommendation at the beginning of each chapter as: high, moderate or low. The strength of the evidence was assessed by the working group and the special subject adviser and classified as either high, moderate or low. If the working group had consensus on a recommendation, for which there is no evidence, this is marked by a (√).

Recommendations that were weighted strongly by the working group include wordings such as: "It is recommended to ... " or "It is not recommended to … ", whereas recommendations that were weighted weaker by the working group include wordings such as: "It may be considered to ... " or "It is not recommended to use … routinely … ".

The recommendations are preceded by the following indications of their strength:

↑↑ = a strong recommendation for
↓↓ = a strong recommendation against
↑ = a weak/conditional recommendation for
↓= a weak/conditional recommendation against

The symbol (√) stands for good practice. This symbol is used in case of lack of evidence, when the working group wants to emphasise particular aspects of the established clinical practice.

The recommendations are followed by the following symbols which indicate the strength of the underlying evidence – from high to very low:

(⊕⊕⊕⊕) = high
(⊕⊕⊕◯) = moderate
(⊕⊕◯◯) = low
(⊕◯◯◯) = very low

In case of lack of evidence, a recommendation is not followed by a symbol. This applies to the good practice recommendations.

Further information at sundhedsstyrelsen.dk
At sundhedsstyrelsen.dk, a full-length version of the national clinical guideline is available, including a detailed review of the underlying evidence for the recommendations.

About the national clinical guidelines
The national clinical guideline is one of the 50 national clinical guidelines to be prepared by the DHA during the period 2013-2016.

Further information about the choice of subjects, method and process is available at sundhedsstyrelsen.dk.