

Foot Management for Diabetic Patients

Diabetic patients

Diabetic foot (foot ulceration • gangrene)

YES

Refer to
(Assessment
& treatment
of diabetic
foot patients)

NO

Clinical interviews

- Identification of risk factors of the diabetic foot
- Conditions of non-ulcerative lesion (callus, corn, tinea pedis, toe deformities, fissures, etc)
- Conditions of daily footwear and socks

Clinical examination (systemic)

- General physical examination
- Arteriosclerotic disease
- Arrhythmia

Clinical examination (foot)

Neuropathy

- Achilles tendon reflexes
- Vibration perception
- Monofilament
- MCV, F-waves
- SCV
- CV_{R-R}

Vascular disease

- Pedal artery pulsation
- ABI
- TBI
- TcPO₂
- SPP

Peformities

- Toe deformities
- Pes cavus
- Charcot foot
- Hallux valgus
- Hallux rigidus

Skin lesions

- Callus, Corn
- Nail deformities
- Tinea pedis
- Fissures, blisters
- Edema, swelling

Shoes

- Appropriate footwear

Evaluation of the at-risk foot

High risk

Regular foot management

- Treatment of non-ulcerative lesion
- Specialized foot care advice
- Advice & provide proper footwear

Monthly foot inspection

Low risk

General foot care advise

6month~annual foot inspection

Assessment & treatment of diabetic foot patients

Clinical interviews for diabetic foot patients

Intrinsic factors (Identification of risk factors)	Extrinsic factors (causes of the diabetic foot)	Foot lesions	Foot wear
<ul style="list-style-type: none">■Duration of diabetes■Condition of glycemic control■Peripheral neuropathy■Impaired vision■Renal impairment■PAD■Callus,corn■Foot deformities■History of foot amputation■Knowledge of foot care■Compliance	<ul style="list-style-type: none">■Shoe irritation■Trauma■Burns■Ischemia■Chemical drugs etc	<ul style="list-style-type: none">■Date of onset■Situation of onset■Size,depth and process■Redness,swelling, drainage■Identification and process of necrosis■Complications of fever,chill, general fatigue■Identification of non-ulcerative pathology	<ul style="list-style-type: none">■Types of daily footwear■Purchasing standards■Time / day of wearing footwear■Identification of barefoot walking■Specifying the shoes worn at the time of injury

Assessment & Treatment of Diabetic Foot Patients

Bedside assessment of diabetic foot patients

Systemic inspection

- Bruit at the inguinal and abdominal region
- Asymmetrical difference of the brachial blood pressure
- Arrhythmia
- General physical examination

Neuropathy

- Motor neuropathy
- toe deformities
- pes cavus
- muscle atrophy of the lower limb
- gait disturbance
- Achilles tendon reflexes
- Autonomic neuropathy
- dry skin
- orthostatic hypotension
- ECG (CV_{R-R})
- Sensory neuropathy
- vibration perception (tuning fork)
- touch/pressure perception (monofilaments)
- tactile sensation (cotton wool)
- pain sensation (pin prick)
- temperature sensation (test tube with cold or hot water)

Vascular disease

- change in skin color, atrophy
- lower extremity arterial pulsation
- skin temperature
- blanching of the feet on elevation
- dependent rubor
- capillary refill time (normal value:<3 seconds)
- venous filling time (normal value:<20 seconds)
- ankle pressure (ABPI : $0.95 \leq$ normal value<1.3)
- segmental blood pressure measurement (difference of blood pressure between adjacent areas<20mmHg)
- toe pressure (TBI > 0.6)

Toe deformities

- toe deformities (hammer toes, claw toes)
- pes cavus
- Charcot foot
- hallux valgus
- hallux rigidus

Shoes, Socks

- appropriate footwear
- identification of blood stains and drainage

Joint mobility

- ankle joint
- subtalar joint
- first MTP joint

Clinical examination of the diabetic foot

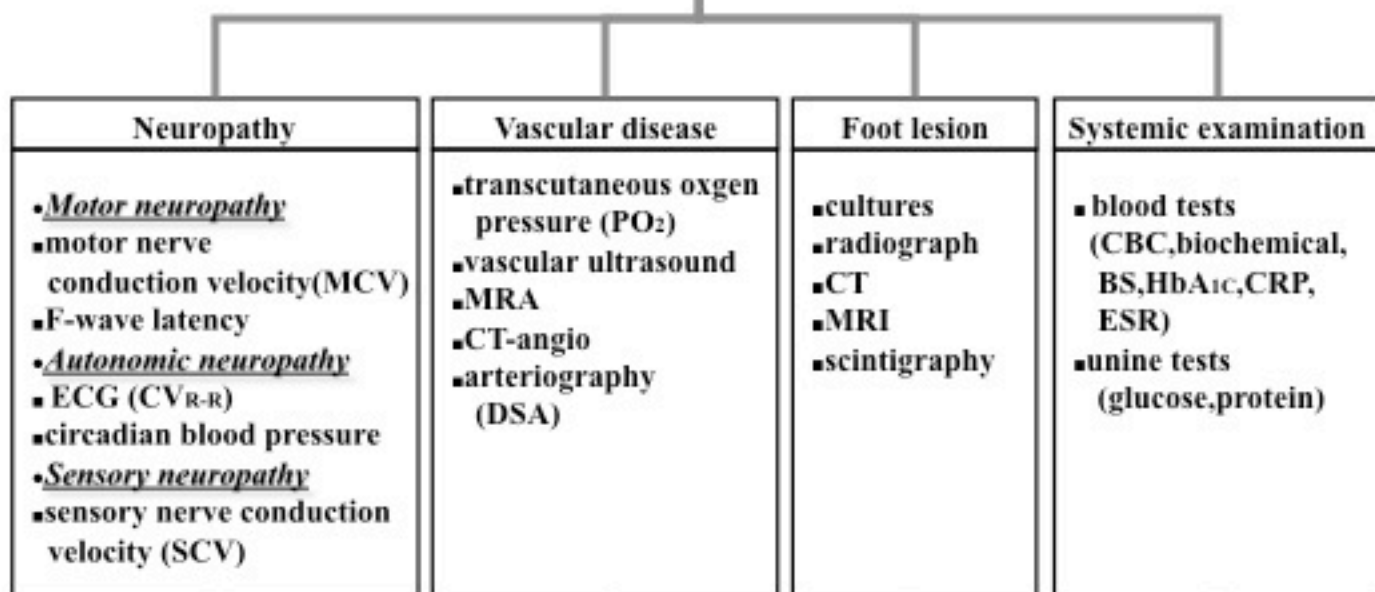
- site
- color
- size
- depth
- condition of marginal areas of the ulcer
- exudate
- cellulitis, lymphangitis
- abscess
- necrosis
- non-ulcerative skin lesions

Evaluation on the severity of the diabetic foot

Investigation

Assessment & treatment of diabetic foot patients

Investigation for diabetic foot patients



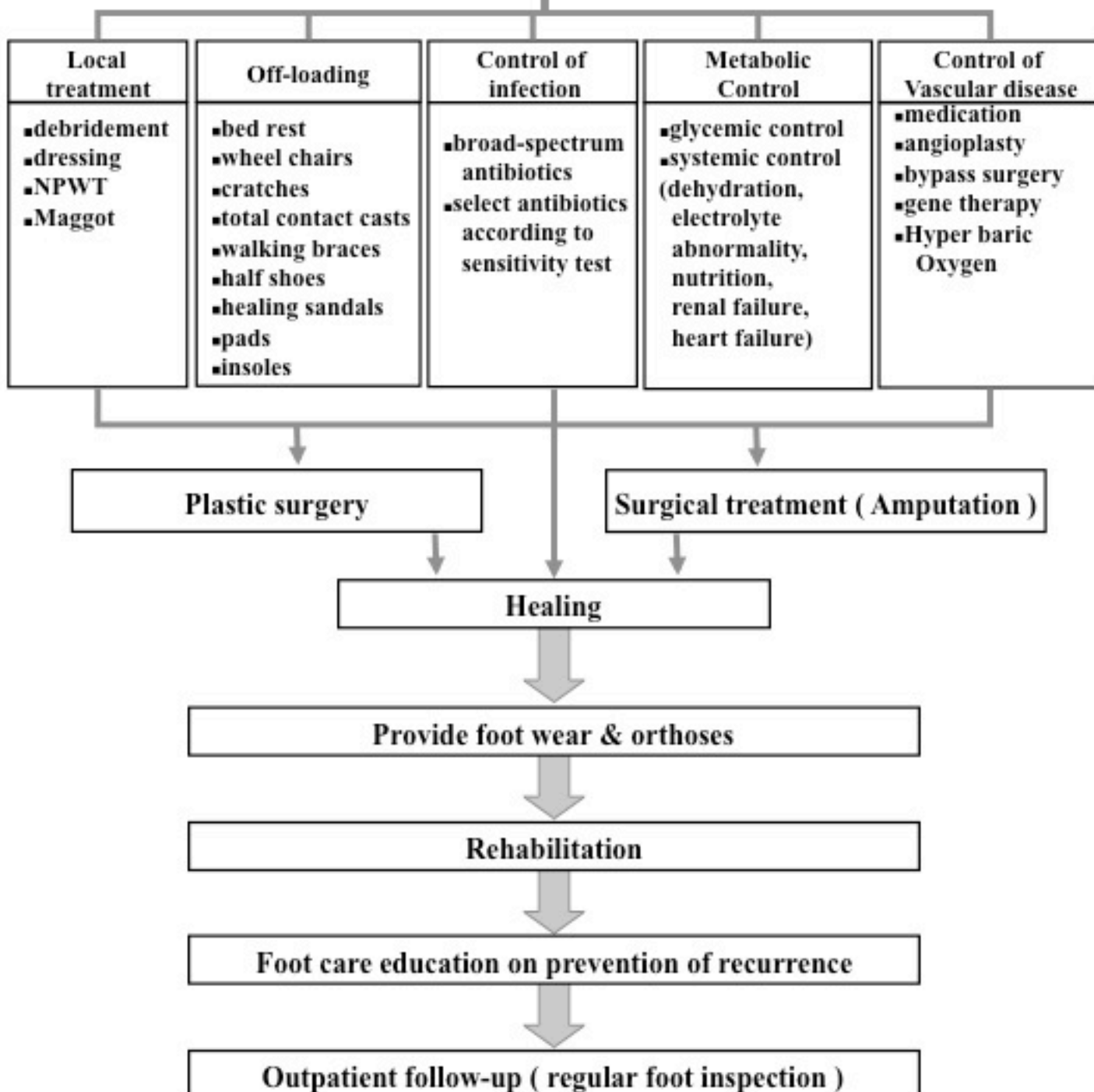
Evaluation on the severity of the diabetic foot

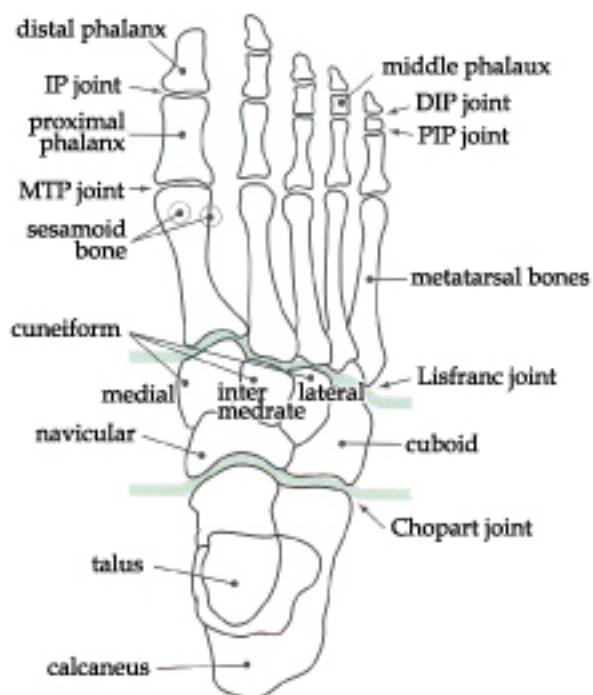
Evaluation on the risk of amputation

Treatment

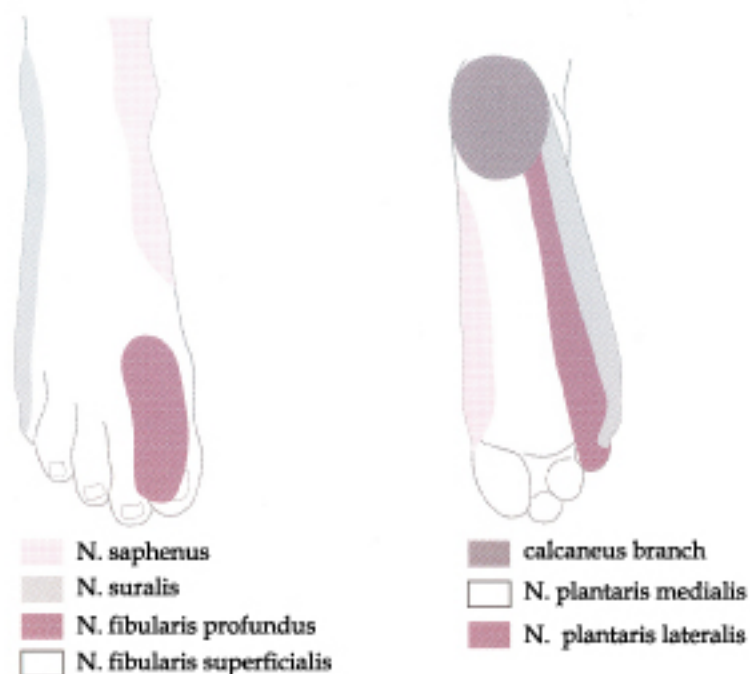
Assessment & treatment of diabetic foot patients

Treatment of diabetic foot patients

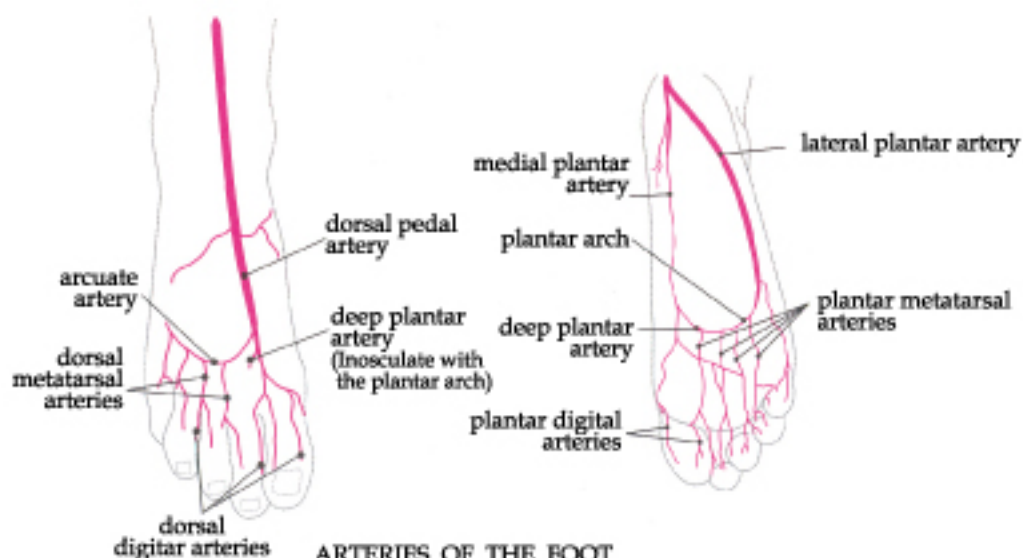




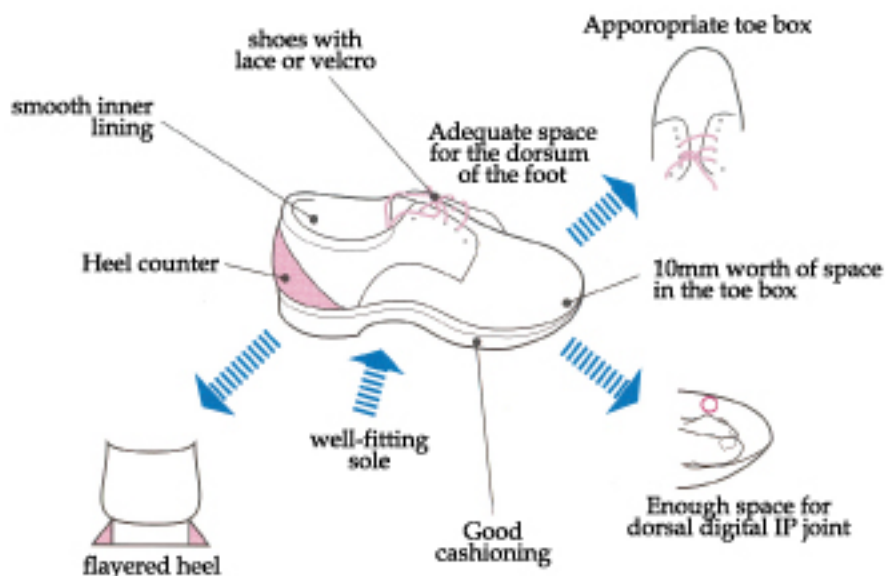
SKELETON OF THE FOOT



SENSORY NERVES OF THE FOOT



ARTERIES OF THE FOOT



SHOES FOR DIABETIC PATIENTS