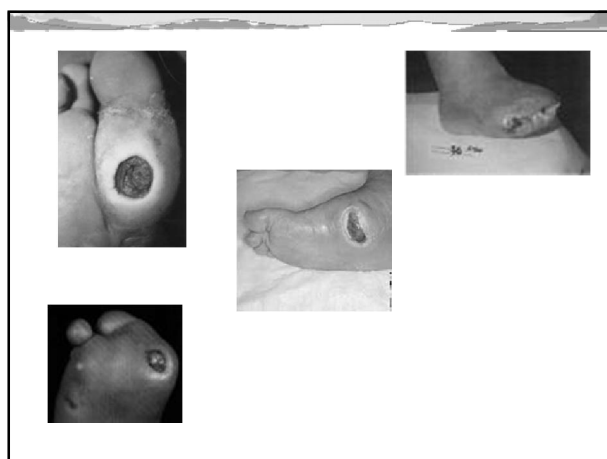


The Foot in Diabetes. Preventing Ulceration and Amputation.



Diabetic Foot Complications.

- Diabetic foot complications are the commonest cause of non-traumatic lower extremity amputations in the industrialized world. The risk of lower extremity amputation is 15 to 46 times higher in diabetics than in persons who do not have DM.

South Med J 1997; 90: 384-9
Diabetes Care 1996; 19: 48-52

- diabetic foot complications are the most frequent reason for hospitalisation in patients with diabetes, accounting for up to 25% of all diabetic admissions in the United States and Great Britain.

Diabetes Care 1990; 13: 513-21.

- A non-healing foot ulcer precedes approximately 85% of all amputations.
- Diabetic foot ulcers and lower extremity amputations are serious and expensive complications that occur in as many as 15% of people with diabetes during their lifetime.

Diabetes Care 1998; 21: 2161-77.

What Happens to the Diabetic Patient's Feet Over Time ?

Simplified Pathway

- ⇒ Diabetes (poorly controlled)
- ⇒ Neuropathy
- ⇒ Intrinsic foot muscles
- ⇒ Deformities
- ⇒ Wrong footwear
- ⇒ Wrong environment
- ⇒ Ulcer

Insenate foot
↓
Increased pressure
↓ ±
Nail or thorn or stone

Areas at Risk



IWG on the diabetic Foot

Role of pressure points



Callus formation



Subcutaneous haemorrhage

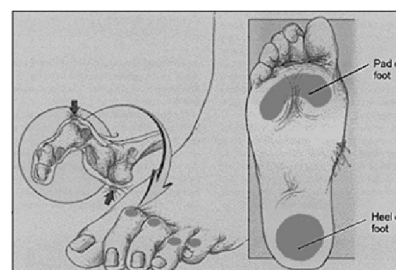


Breakdown of skin



Deep foot infection with osteomyelitis

IWG on the diabetic Foot



Usual locations of ulcers in the diabetic foot. Ulceration is particularly likely to occur over the dorsal portion of the toes and on the plantar aspect of the metatarsal heads and the heel.

AEP March 1998

Prevent Neuropathy

Good glucose control

- ⇒ DCCT: 60% reduction in the intensive group
- ⇒ UKPDS: There was a 37% decrease in microvascular endpoints observed per 1% reduction in glycosylated haemoglobin. Results for neuropathy endpoints were not reported.

Detect Neuropathy

- ⇒ Central in pathway in pathway of foot complications
- ⇒ Aim: to detect it early
- ⇒ Action: educate, treat non-ulcer pathology (eg. Bony deformities, corns, callus), appropriate footwear ± orthoses

Annual Exam of the Foot

- ⇒ Inspect: skin, bony abnormalities
- ⇒ Palpate: pedal pulses
- ⇒ Test for neuropathy: monofilament (tuning fork)
- ⇒ Check footwear

Bony Abnormalities



Bunion



Check Shoes Size and Interior

The internal width of the shoe should be equal to the width of the foot.



IWG on the diabetic Foot

Monofilament 10g



Vibration sense 128Hz Tuning fork



If any foot is identified as at RISK then:

- ⇒ Manage non-ulcer pathology (podiatrist if possible)
- ⇒ Treat foot ulcers appropriately (primary care: refer)
- ⇒ Educate and evaluate feet frequently

Foot Education

- Daily feet inspection, including areas between the toes.
- If the patient cannot inspect the feet, someone else should do it.
- Regular washing of feet with careful drying, especially between the toes.
- Temperature of the water should always be less than 37° C.
- Avoidance of barefoot walking in- or outdoors and wearing of shoes without socks.

Foot Education

- Daily inspection and palpation of the inside of the shoes.
- If vision is impaired, the patient should not try to treat the feet (e.g. nails) by themselves.
- Lubricating oils or creams should be used for dry skin, but not between the toes.
- Daily change of stockings.

Foot Education

- Wearing of stocking with seams inside out or preferably without any seams at all
- Corns and calluses should not be cut by patients, but by a health care provider.

Foot Education

- The patient must ensure that the feet are examined regularly by a health care provider.
- The patient should notify the healthcare provider at once if a blister, cut, scratch or sore has developed.
- Chemical agents or plasters to remove corns and calluses should not be used.

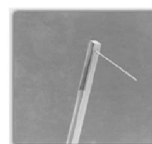
Do's and Don'ts of foot care



Patient should

- ❑ check feet daily
- ❑ Wash feet daily
- ❑ Keep toenails short
- ❑ Protect feet
- ❑ Always wear shoes
- ❑ Look inside shoes before putting them on
- ❑ Always wear socks
- ❑ Break in new shoes gradually

Use it!



Or lose it!



SEMDSA Guidelines

- ⇒ Footcare for patients with diabetes
- ⇒ Available April 2004