



DO'S AND DONT'S FOR PREVENTION OF DIABETIC FOOT ULCER. (DFU)

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ABSTRACT

Background: Diabetic foot ulcers are complex, chronic wounds which have a major long term impact on the morbidity, mortality and quality of life of patients. Individuals who develop DFU are at greater risk of premature death, myocardial infarction and fatal stroke than those without DFU. DFU becomes chronic with recurrent infection and eventually leading to amputation, and it is totally preventable. Patient education should be an integral part of management and prevention. The burden of DFU (diabetic foot ulcer) has been recently recalculated and according to new estimates, every 20 seconds a leg is lost somewhere in the world.

Methods: The study was a single centre, prospective observational study conducted in out patient departments and in patient wards of Medicine, Diabetology, Dermatology and Surgery and Plastic Surgery. All adult patients with diabetes were enrolled in the study.

Results: Over 112 patients were studied with age range 18-60 years with mean age of presentation 39 years. All patients with diabetes with or without diabetic foot ulcers were examined detailed history and clinical examination and routine investigations and diabetic packages were carried out according to patients need and requirements. All these patients who have enrolled were given detailed counseling about diabetic foot ulcers the methods to prevent diabetic foot ulcers and amputations. They were given pamphlets containing dos and don'ts for prevention of diabetic foot ulcers in both English and Tamil languages were distributed. Videos were played in common corridors and waiting rooms insisting the ways to take care of the foot daily. All these patients were allowed to take oath and sign in the promise they take to prevent diabetic foot ulcers (DFU).

Conclusions: The purpose of this article is to discuss current evidence to achieve better results in DFU management and reduction in amputations by setting up validated techniques for screening and allocating proper tools for prevention of DFU. This article basically teaches the patients even if they are illiterate by means of pictures. They also illustrate clearly how and what to follow to prevent DFU.

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INTRODUCTION

The Diabetic foot represents one of the most devastating complications of diabetes mellitus (DM).¹ Among the complications of DM are foot problems, which is also the most common cause of non traumatic limb amputations. Foot problems in diabetes are often caused by nerve damage and or damage to the blood vessels.² High blood sugars over the long period of time affect the blood vessels and nerves which reduces the blood flow, especially in legs and feet.² The annual foot ulcer incidence among patients with DM is 2-3% and documented US and UK prevalence ranges from 4%-10%. The life time risk of developing a DFU has also increased and it is estimated to be 25%.¹⁴

METHODS

The study was a single centre, prospective observational study conducted in out patient departments and in patient wards of Medicine, Diabetology, Dermatology and General Surgery and Plastic Surgery. All adult patients with diabetes were enrolled in the study. Both new and old registrations were included in the study.

DISCUSSION

DO 'S

1. Good control of diabetes with strict diet, adequate exercises and proper drugs will reduce the risk of the foot complication.¹

2. You should take care of your foot like your face. Examine your feet daily for any injury, blisters, cracks, bite marks, retained foreign bodies, scratches, scaling and discoloration, particularly.
3. Attention should be given to web spaces and to the area between the toes.³
4. Wash your feet daily. Dry carefully.²
5. Look for dry and cracked skin, blebs or sores, Bruises or cuts, redness, warmth, or tenderness and any soft, with fluctuation, firm or hard and red spots.¹
6. Avoid extreme of temperature hot or cold. Test water with your hands or elbow before bathing.²
7. Inspect the insides of your foot wear daily for foreign objects and rough areas.³
8. Protect foot from hot objects.²
9. Wear properly fitting 100% cotton socks. Always wear comfortable leather shoes with socks.¹⁵
10. Check shoes and socks for any foreign objects daily and check your feet after you take them off at the end of the day.¹⁵
11. Avoid crossing your leg while seated as this can cause pressure on the nerves and blood vessels.²
12. Inform your doctor about any change in skin colour, pain or any abnormal sensation such as tingling, burning and pricking sensation.¹

- Do not use medicated pads, try to shave or cut corns and calluses at home.²
- To keep cracked heels at bay, it's necessary to keep the feet moisturized. But ensure that the feet are not dam or sticky afterwards.³
- Avoid going barefoot on a regular basis, or wearing open-backed shoes.¹⁵
- Expose your feet to the environment as well as to hard surfaces leads to wear and tear on the skin and heels that can result in dreaded fissures.⁵
- Avoid walking bare foot even inside the house.⁶
- Don't wear ill fitting shoes or open tied shoes, particularly sandals with tongs between the toes.²
- Don't wear wet foot ware it can be a source of infection, eg., Athlete's foot.¹⁵
- Don't apply plaster , corn remover or any type of adhesive tape.³
- Don't apply cream or ointment between toes. Dust a non medicated powder between the toes after washing and drying.⁴
- Don't use hot water bottle or heating bags on your feet.²



Examine your foot



Look between your toes



Keep Your Toes Dry

Look at Your Feet Every Day



Daily Foot Care For Dry Feet



Cut toenails Straight across



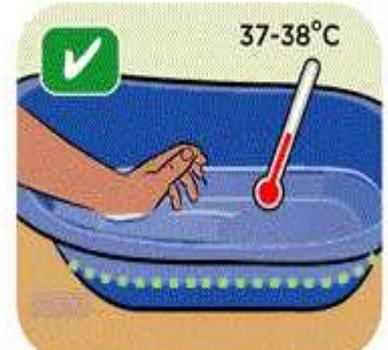
Shoes that fit protect your feet



Smoothen edges with emery board



Check feet and footwear for foreign bodies



Check water Temperature

DONT'S



- Avoid smoking; it reduces blood circulation leading to loss of limb.³
- Never use scissors, blade, knife to cut nails; use of nail filer is safer.¹
- Toe nail should not be cut too short and the toe nail angle should not go deep into the nail pad.²

I Promise Myself

To Protect My Feet And Legs Through Out My Life Time, I Promise To Do The Following Everyday, Without Fail.³

- Before going to bed in the night, I would check my legs and feet for wounds, cuts etc.,⁴
- I would wash my legs with warm water and keep them clean.
- Before pouring hot water on my feet, I would check whether the temperature of the water is tolerable.³
- I would visit temples or bare foot walking or jogging in beaches or roads and ground only during early Mornings or evenings to avoid burns.
- I would not resort to self medications or treatment at home for small wounds or colour change and burns³.
- I will seek medical attention even when there is a slight change in the foot.²
- I will avoid 'Bathroom' surgery for corns, callosity, using razor blades.¹
- I will never use hot water fermentation, strong chemicals and irritants for pain relief.⁹
- I will apply Vaseline or vegetable oil to prevent drying.³
- I will use special diabetic slippers both inside and outside the house and office.¹⁵
- I will use a proper and correct fitting foot wear.³

- I will inspect my foot wear and socks before I wear for stones, thorns, foreign bodies.
- I will use only cotton socks of correct size.³
- I would cut my nails straight and will take extra precautions to cut nails³.
- If I develop a fever or slight temperature I would check for wounds or cuts in my feet and legs.²
- I will take care of my feet as I take care of my face and inspect my feet and wash it twice or thrice a day regularly.¹

Ten Commendments

1. I am thy foot forever. Take good care of me, for thou shalt have no foot other than me⁴
2. Thou shalt regularly debride me, when I develop callosities and ulcers²
3. Thou shalt fit me with casts and insoles to offload my high pressure areas⁶
4. Thou shalt carefully look for early signs of infection in me and treat it aggressively⁷
5. Thou shalt diagnose ischaemia without delay and revascularise me⁸
6. Thou shalt educate all patients how to examine me and take care of me⁹
7. Thou shalt carefully inspect the shoes that I have to wear and encourage the use of appropriate footwear¹⁰
8. Thou shalt continuously aim to achieve tighter blood glucose control for me¹¹
9. Thou shalt not commit amputation on me, unless there is a compelling reason¹²
10. Thou shalt not covet thy neighbour's amputation rates, but try to improve yours¹²

RESULTS

Over 112 patients were studied with age range 18-60 years with mean age of presentation 39 years. All patients with diabetes with or without diabetic foot ulcers were examined detailed history and clinical examination and routine investigations and diabetic packages were carried out according to patients need and requirements. All these patients who have enrolled were given detailed counseling about diabetic foot ulcers the methods to prevent diabetic foot ulcers and amputations. They were given pamphlets containing dos and don'ts for prevention of diabetic foot ulcers in both English and Tamil languages were distributed. Videos were played in common corridors and waiting rooms insisting the ways to take care of the foot daily. All these patients were allowed to take oath and sign in the promise they take to prevent diabetic foot ulcers.

CONCLUSIONS

The purpose of this article is to discuss current evidence to achieve better results in DFU management and reduction in amputations by setting up validated techniques for screening and allocating proper tools for prevention of DFU. This article basically teaches the patients even if they are illiterate by means of pictures. They also illustrate clearly how and what to follow to prevent DFU.

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