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Title

How do the doctor, shoe technician and researcher collaborate and help each other to run a busy outpatient diabetic foot clinic?

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Summary

In this lecture, I will discuss how we follow the state-of-the-art design protocol for custom-made orthopaedic footwear in our clinic. When doing so, rehabilitation physician, shoe technician and researchers collaborate and together prescribe and provide patients with their footwear.

Introduction/ basics

Foot ulceration is one of the major health problems for people with diabetes mellitus. It is estimated to affect 19% to 34% of people with diabetes at some time in their lives. [1]

The risk factors for developing a foot ulcer are mainly peripheral neuropathy, peripheral artery disease, foot deformities like pes cavus and claw- hammer toes and previous ulceration or amputation of the foot.. [1]

Looking into the problem of the foot deformities, adjusted footwear and offloading are key factors in the treatment. Out of literature we know that custom-made footwear can only be effective in offloading and prevention of ulcer recurrence in high risk diabetic foot patients, if they are made according to the state of the art concept, based on barefoot plantar measurement data and evaluated by inshoe pressure measurements.

Material method; implementation/ process

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Results

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Discussion/ conclusion; conclusion for the practice

In our outpatient diabetic foot clinic all new patients undergo a barefoot plantar measurement and after that the researcher, the shoe technician and the rehabilitation specialist look together

to these data and formulate together the recipe of the footwear. This is done according to the matrix of the state of the art design protocol for custom-made footwear [2].

After providing the patient with their custom-made footwear, inshoe pressures are measured and if necessary optimized until pressures are below 200 kPa.

These footwear design and pressure-relief algorithms are the first of their kind and should facilitate more uniform decision making in the prescription and manufacturing of adequate shoes for moderate-to-high-risk patients, reducing variation in footwear provision and improving clinical outcome in the prevention of diabetic foot ulcers. [2]

In this talk, I will share my experiences on using this protocol in daily clinical practice.

References

References:

1. Armstrong DG, Boulton AJM, Bus SA. Diabetic Foot Ulcers and Their Recurrence. *N Engl J Med.* 2017 Jun 15;376(24):2367-2375.
2. Bus SA, Zwaferink JB, Dahmen R, Busch-Westbroek TE. State of the art design protocol for custom-made footwear for people with diabetes and peripheral neuropathy. *Diabetes Metab Res Rev.* 2020 Mar;36 Suppl 1(Suppl 1):e3237