Chair

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Title

State-of-the-art care of diabetic foot disease by an interdisciplinary team

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Summary

Adequate pressure-relieving footwear is important to help prevent foot problems in people with diabetes. State-of-the-art principles in footwear design and biomechanics pressure relief and other innovations will be presented during this lecture

Introduction/ basics

This lecture is part of the symposium "State-of-the-art care of diabetic foot syndrome by an interdisciplinary team". The aim of this symposium is to discuss this topic from a variety of angles, combining scientific and clinical knowledge, to provide best-practice examples and practical solutions.

Foot disease is a major problem in people with diabetes mellitus. Every 30 seconds someone in the world loses a leg because of diabetes. A foot ulcer precedes most amputations. ncreased mechanical pressure on the foot during ambulation is an important risk factors for foot ulceration. Therefore, reduction of these pressures is important both in the prevention and treatment of these chronic wounds.

Material method; implementation/ process

For ulcer prevention, custom-made footwear is commonly prescribed to people with diabetes, in particular to those that have healed from a plantar foot ulcer and have foot deformity that limits the use of standard footwear. Custom-made footwear aims to redistribute pressures on the foot and reduced pressure at locations that are a high risk for ulceration (pressure points). International guidelines from the IWGDF report on the importance of custom-made footwear and insoles to prevent recurrence of plantar foot ulcers in patients in remission. Innovations in footwear technology include the use of plantar pressure measurements to guide design and

modifications to the footwear that optimize the pressure relieving properties of the shoe. The efficacy of this approach has been tested in several trials.

Results

These trials show that barefoot or in-shoe plantar pressure measurements can improve the footwear of high-risk patients with diabetes, and can lead to better clinical outcomes in prevention.

Discussion/ conclusion; conclusion for the practice

Further innovations include the development of scientific-based protocols to help in clinical decision-making for the right type of footwear and for the design of custom-made footwear for different levels of foot complications. Other innovations include the testing and comparison of scientific-based pressure-based footwear design on plantar pressure relief, of which the results can help in moving towards designing the most optimal shoe for diabetic foot prevention. Other innovations will also be presented during this lecture

References

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