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Objective:

- Upon completion of the lecture, attendees should be better prepared to:
- Recognize the significant risk of amputation in diabetic patients sustaining preventable foot burns
 - Identify potential factors that may place patients at increased risk for requiring amputation
 - Consider ways to implement preventative measures through patient education.

Abstract:

Introduction: Studies have shown that diabetic patients have worse outcomes when sustaining burns than do non-diabetic patients. The objective of our study was to look specifically at diabetic patients who sustained preventable foot burns and evaluate the risk factors leading to the requirement for amputation.

Methods: Retrospective analysis of diabetic patients (>18 years old) admitted to our burn center with isolated preventable foot burns from July 2014 to March 2018. Preventable burns were caused by prolonged exposure to heat such as soaking feet in hot water. Data collected such as mechanism of the burn, depth of the burn, TBSA, hemoglobin A1C, insulin dependence, and need for grafting were analyzed in an attempt to identify risk factors for amputation.

Results: 17 diabetic patients with isolated preventable foot burns were treated during the study period. 30% sustained burns from walking on a hot surface, 35% sustained burns from prolonged contact with a space heater, 35% sustained burns from a hot water soak. 35% of patients required an amputation during the course of their treatment. Risk factors evaluated for the need for amputation included hemoglobin A1C >9, RR 3.00 (95% CI 0.45-19.93, p=0.256), deep partial or full thickness burns, RR 6.00 (95% CI 0.40-90.08, p=0.195), hemoglobin A1C >9 and deep partial or full thickness burns, RR 3.89 (95% CI 0.58-26.17, p=0.163), and insulin dependence, RR 0.44 (95% CI 0.11-1.81, p=0.258).

Conclusion: Our study is limited by its small sample size but certainly highlights the risk of the significant morbidity of amputation with preventable foot burns in the diabetic patient population. Our study showed trends towards risk factors associated with the need for amputation but do not demonstrate statistical significance likely due to the study being underpowered. Further investigation is needed to better elucidate the risk factors associated with amputation but preventive measures through diabetic burn education will be paramount in combating this morbidity.

References and Resources:

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Disclosure:

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