Omadacycline pharmacokinetics and soft-tissue penetration in diabetic patients with wound infections and healthy volunteers using in vivo microdialysis, Gill et. al, *Journal of Antimicrobial Chemotherapy*, Volume 77, Issue 5, May 2022

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Level of Evidence: 2

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The objective of this study was to analyze plasma and soft-tissue exposure to omadacycline in both normal and diabetic patients with foot infections. Using in vivo microdialysis as the assessment of the study, eight diabetic patients and six healthy patients were chosen to be treated with the following protocol: 200 mg IV loading dose followed by two oral 300 mg every 24 hours. With catheters placed in the tissue of diabetic patients near the foot infections or in the thighs of the normal patients, pharmacokinetic and pharmacodynamic data regarding the protein binding of omadacycline is collected. Using this administration method, fluid samples were drawn before the third dose and again 24 hours after dosing is complete.

This study assessed the following parameters in both the diabetic patients and healthy patients: the Cmax, AUC, and mean plasma free fraction. The outcome of this data supports the efficacy of omadacycline administration in diabetic patients with foot infections. Additionally, the use of omadacycline is very beneficial during the transfer between hospital and an outpatient setting when coupled with a once-daily oral treatment plan.
