

Editorial

Editorial: Xylazine-Associated Wounds – A New Frontier in Drug-Related Morbidity

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The opioid epidemic in the United States is a severe, life-threatening public health crisis that has continued to rage since it emerged in the 1990s.¹ Synthetic opioids, mainly illicitly manufactured fentanyl, are the leading cause of opioid-related deaths, accounting for 90% of opioid overdose deaths in 2022.¹⁻³

Another challenge that emerged from the evolving opioid epidemic is the introduction of xylazine to the illicit drug supply. Xylazine or ‘tranq,’ a veterinary sedative not approved for human use, has become commonly used as an adulterant in the illicit opioid supply, namely fentanyl.⁴ Xylazine was first detected as an adulterant in Philadelphia’s

drug supply in 2010. Since then, its use has rapidly spread across the nation and has been found in drug supplies in 48 states. The Philadelphia region is the epicenter of xylazine use, with it being detected in 91% of the heroin and drug supply.⁵ Its widespread use has led to a new clinical challenge of xylazine-associated wounds.

I first saw these unique necrotizing xylazine-associated wounds in people who used fentanyl drugs during the Corona Virus Disease-2019 (COVID-19) pandemic period of 2019-2022. The first “xylazine-associated wound” documented by electronic medical records at my hospital institution was in April 2020. Xylazine wounds are similar in appearance to a non-healing severe burn wound and are commonly mistaken by patients and medical providers as burn wounds. They present differently than traditional intravenous drug abuse soft tissue infections. They often begin as small, dark, purplish-black blisters with irregular borders that later progress to dry, adherent eschars and deep ulcers that can expose and damage muscle, tendon, and bone. Bone involvement can sometimes result in osteomyelitis, pathologic fracture, significant bone loss, and even auto-amputation of the limb. The wounds can occur distant to the injection site and can even develop in those who use xylazine by snorting or smoking methods. The pathophysiology of the wounds is attributed to xylazine’s peripheral vasoconstrictive effects, which reduce blood flow and oxygenation to the tissues, thereby leading to tissue necrosis.⁶

Xylazine-associated wounds do not present like necrotizing soft tissue infections, which is a surgical emergency. Instead, these wounds are not a risk of mortality but are associated with significant morbidity. Emergent surgical debridement is not necessary to treat these wounds. Drug abstinence with local wound care is the recommended

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treatment for The Philadelphia Classification Stage I (mild) and Stage 2 (moderate) wounds.^{7,8} Stage 3B (severe wounds with no hand function) wounds are not salvageable, and amputation is recommended.^{7,8}

Xylazine wounds are challenging to treat, especially with continued drug use. However, a multi-disciplinary approach and abstinence from drug use are key to overcoming the disease of addiction and giving the wounds a chance to heal with local wound care. Collaborative efforts have led to the development of early clinical guidelines for managing these wounds. Early identification of the wound, utilizing a multidisciplinary treatment team approach that includes addiction medicine, various surgical specialties (orthopaedic, plastic, general, hand, and burn), infectious dis-

ease, internal medicine, emergency medicine, social workers, and physical and occupational therapists, is integral. Furthermore, the Philadelphia Treatment classification can help guide the management of these wounds.

Addressing this public health crisis requires collaboration among medical and public health professionals, as well as policymakers, to implement harm reduction strategies and education, promote equity in access to healthcare, and conduct surveillance of the evolving drug supply.

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