

COMPELLING COMMENTS

Xylazine: An Ulcerating Addiction

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Xylazine, a muscle relaxant typically used as a horse tranquilizer, has recently found its way to the US drug market.¹ There are increasing cases of xylazine-laced fentanyl, further exacerbating the opioid epidemic.¹⁻³ While efforts to combat this new drug issue are underway, dermatologists should be aware of the complications arising from xylazine. Regular use of xylazine has been associated with the formation of skin ulcers.¹⁻³ Though the mechanism of action is incompletely understood, a possible pathophysiology may be rooted in xylazine's role as an alpha-2-agonist.¹⁻³ Cutaneously, xylazine functions as a vasoconstrictor, which can drastically reduce skin perfusion and impair wound healing.³ When an ulcer initially forms, it is painful, which may prompt users to continually inject at the site of the ulcer in an attempt to decrease pain, further exacerbating the ulcer.² The deleterious cycle of vasoconstriction and repeated injection may account for the high infection rate seen with these ulcers, which can even progress to necrosis.¹⁻³ Xylazine lesions can develop over areas of the body deprived of intravenous injection, thus providers should not only examine injection sites.⁴ Xylazine ulcers have had a wide characterization, from a sole oval retiform purpuric plaque to extensive necrotic ulcerations.^{1,3} Biopsies have demonstrated epidermal necrosis with

focal fibrin thrombi, nonspecific inflammation, and subcutaneous necrosis.¹

Xylazine-induced skin ulcers are a serious pathology that dermatologists should consider in any patient with a history of IV drug use. The American Academy of Dermatology (AAD) recommends practicing multidisciplinary care including addiction specialists, infectious disease physicians, wound care experts, as well as plastic surgeons.⁴ A skin biopsy may be warranted if there is a high suspicion of other causes of ulceration (squamous cell carcinoma, pyoderma gangrenosum, etc), though it is not mandatory. The AAD does however recommend wound cultures.⁴ Advanced laboratory techniques such as thin-layer chromatography or gas chromatography-mass spectrometer can detect xylazine, though these testing modalities are not routinely employed in routine practice.⁴ Thus, xylazine-induced skin ulcers is a clinical diagnosis.⁴ The limited data on xylazine-skin ulcers have reported improvement from consistent, local wound care, though this is an area necessitating greater exploration.¹⁻⁴

In less than a decade, Xylazine rose from being involved in 2% of fatal heroin and/or fentanyl overdoses to 31%.^{2,4} Concerted efforts are necessary to prevent Xylazine-induced pathology. For the time being,

dermatologists should be increasingly aware of xylazine-skin ulcers, especially in Philadelphia, Maryland, and Connecticut, as these areas have the highest reported prevalence of xylazine.⁴

Conflict of Interest Disclosures: None

Funding: None

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