Cutaneous Skin Infection Associated with IV Xylazine and Cocaine Use

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Case Presentation

- **HPI**:
  - The patient presented to Penn Presbyterian ED with worsening pain in a non-healing wound on the anterior neck (first appeared 9 months prior to presentation) along with pain and swelling of the right hand limiting mobility and use of the hand.
  - The remainder of the HPI was limited, given the patient was altered and agitated in the setting of intoxication and poorly controlled pain.
  - On chart review, the patient had several prior hospitalizations during which she received intravenous antibiotics and wound care, however on these admissions she was compelled to leave the hospital prior to the completion of her care.
- **PMH**: IV opioid and cocaine abuse, benzodiazepine abuse, HCV. Prior to this admission, she was using 3 bundles of fentanyl combined with xylazine, 16-25 bags of cocaine, and 2 Xanax bars daily.
- **Exam**: In addition to her neck and hand wounds (Figure 1 A-B), she was found to have several additional raised, red, erythematous lesions with fluctuance scattered over her upper and lower extremities.

Hospital Course

- Level 1 urine drug screen was positive for fentanyl, cocaine, and benzodiazepines. Blood cultures were negative.
- Wounds were treated with aggressive local wound care as well as IV cefepime and vancomycin, with significant improvement in soft tissue edema and erythema.
- Her complex withdrawal complicated by significant pain, anxiety, and high opioid tolerance was managed with IV opioids and scheduled benzodiazepines with an emphasis on patient autonomy and shared decision making.
- While admitted, she occasionally was found to have additional, similar red, erythematous, fluctuant lesions which were treated with incision and drainage.
- Unfortunately, on hospital day 7 she was found unresponsive likely in the setting of in hospital injection drug use. She was resuscitated with naloxone and left the hospital prior to completion of her treatment course.
- The patient later returned to the hospital with a significant increase in the burden of her necrotic wounds (Figure 1 C-D).

Dermatologic Findings

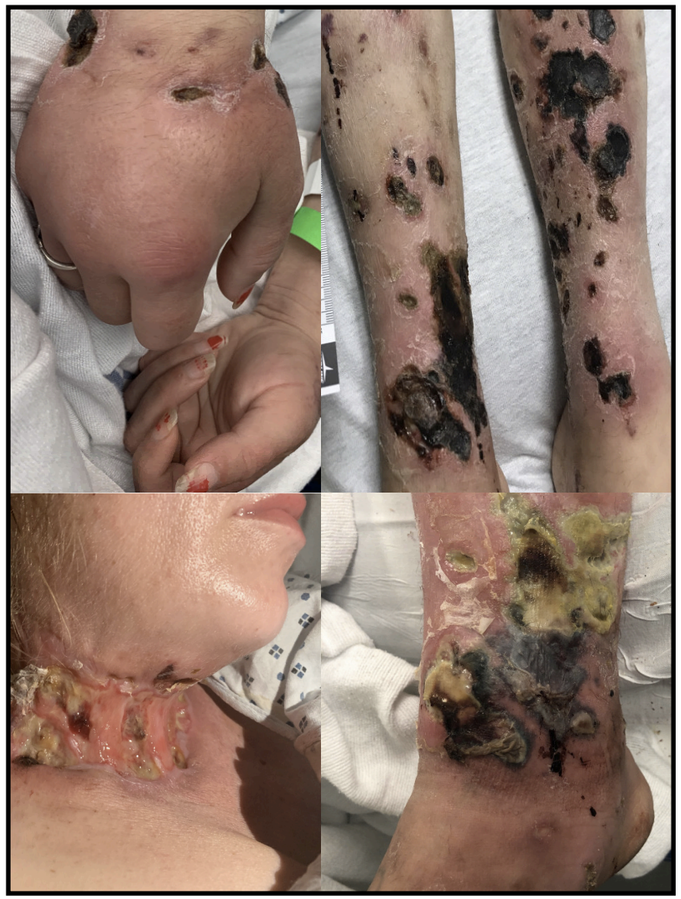

Figure 1: Necrotic ulcers scattered on the extremities.

A. On the dorsal aspect of the right hand are 1-2 cm scattered, necrotic ulcers. The hand is swollen and erythematous.
B. On the right, anterolateral aspect of the neck there is an expansive ulcerative lesion to the level of the fascia/muscle with associated yellow, thick purulence.
C. Scattered on the bilateral anterior thighs are 1-10 cm necrotic wounds with surrounding erythema.
D. On he lateral aspect of the left lower extremity is an 8 cm necrotic wound with associated thick, yellow, purulence. There is surrounding erythema and swelling of the ankle.

Discussion

- This case demonstrates potential consequences of injection of multiple substances, particularly xylazine and cocaine.
- Xylazine, a veterinary sedative and analgesic, is a potent a2-adrenergic agonist. Peripherally, the a2 stimulation leads toarterial vasoconstriction, especially when used in combination with other vasoconstrictors.
- Xylazine was first reported as a drug of abuse in Puerto Rico in the early 2000s and it has become readily available and a highly prevalent drug of abuse in Philadelphia within the past 10 years.
- It is purchased separately but is also used as an adulterant with fentanyl or heroin.

Conclusion

- Chronic injection xylazine use has also been reported to cause skin ulceration, abscesses and cellulitis
- Further, daily cocaine injection is independently associated with an increased risk of cutaneous injection related infections 5.
- This case demonstrates the possibility of xylazine to potentiate the vaso-constrictive effects of cocaine leading to profound soft tissue ulceration and infection

References

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