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TREATMENT OF A PATIENT WITH SEVERE RASH PAIN SECONDARY TO MONKEYPOX VIRUS: A CASE REPORT

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Background: The following case describes a multimodal analgesic approach for pain control in a patient with monkeypox (mpox) lesions.

Case Report: A 48-year-old man presented with a positive mpox test, an inability to tolerate solid foods due to severe throat pain and painful oral lesions, and severe genital burning and rectal pain. The pain management team utilized a multimodal analgesia regimen, which included a viscous lidocaine mouth solution, lidocaine jelly for perineal pain, acetaminophen, ketorolac, gabapentin, and oxycodone. On the following day, he was able to tolerate solid food and reported significantly less pain with defecation and urination.

Conclusion: This case report introduces an effective multimodal approach for pain control of mpox related lesions, which utilizes viscous and/or jelly lidocaine, acetaminophen, gabapentin, nonsteroidal antiinflammatory drugs, such as ketorolac, and opioids, such as oxycodone.

Key words: Anorectal pain, Mpox, multimodal analgesia, oropharyngeal pain, rash

BACKGROUND

The monkeypox (mpox) virus, discovered in 1958, is a zoonotic disease in the genus Orthopoxvirus (1). The first documented human case was in 1970, occurring in the Democratic Republic of the Congo in Africa. Cases remained predominantly in African countries (2). Although structurally related to smallpox, mpox causes a milder symptom complex. Since the eradication of smallpox in 1970, the cross-immunity with mpox has been waning, leading to the recent increase of mpox cases worldwide (3). May 2022 saw the beginning of the current mpox outbreak in the United States (U.S). As of August 23, 2023, according to the Centers for Disease Control and Prevention, there have been 30,767 mpox cases in the U.S. with 50 reported deaths (2).

The mpox virus spreads via a multitude of pathways, including direct skin-to-skin contact, indirectly through respiratory secretions, or the sharing of objects among patients with mpox. Typically, 3 weeks after exposure, patients begin having flu-like symptoms such as fever, malaise, chills, headaches, and myalgia (2). Rashes are present in 95% of infected patients and tend to develop 1-4 days after initial symptom onset. The rash often progresses through 4 stages, which are macular, papular, vesicular, and pustular; scabbing and desquamation typically follow (Fig. 1). Rashes in the oropharynx are particularly troublesome given the excruciating pain experienced with food intake, often leading to malnutrition. The following case describes a patient admitted for inability to tolerate solid food secondary to severe oropharyngeal pain from mpox.

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Fig. 1. Different stages of mpox rash (photos of the actual patient).

CASE

The patient, a 48-year-old man, presented with fever, cough, sore throat, myalgia, and a diffuse total body pustular rash for 4 days. He had tested positive for mpox polymerase chain reaction test the day prior. The patient also endorsed severe pain with defecation and urination, and an inability to tolerate solid food due to severe throat pain. Prior to admission, he tried ibuprofen and lidocaine patches on his genitalia with minimal relief.

Pertinent medical history included hepatitis C, cytomegalovirus colitis, depression, HIV/AIDS with a CD4 129, neurosyphilis (status post treatment in 2015), and shigellosis. Home medications included fluoxetine 20 mg daily for depression and intermittent use of antiretroviral therapy with bictegravir 50 mg - emtricitabine 200 mg - tenofovir alafenamide 25 mg. The patient was a current smoker and habitual user of methamphetamine and cocaine. He self-described as bisexual and was sexually active with multiple partners.

On presentation to the emergency department, vital signs were unremarkable, with exception to a heart rate of 117 beats per minute. His physical exam was significant for a diffuse full body rash (Fig. 2), including painful anal and oral lesions. His heart rate later normalized after receiving a one liter bolus of 0.9% normal saline, 650 mg oral acetaminophen, 15 mg intravenous ketorolac, oral oxycodone-acetaminophen 5-325 mg, and 2% lidocaine viscous mouth solution. He was later admitted for further pain control for the mpox lesions.

On day one of admission, the patient was prescribed oral tecovirimat 600 mg 2 times daily, 5 mL 2% lidocaine viscous mouth solution 2 times daily, 5 mL viscous 2% lidocaine soaked gauze for his perineum, oral acetaminophen 975 mg every 8 hours as needed for mild pain, intravenous ketorolac 15 mg every 6 hours as needed for moderate pain, oxycodone-acetaminophen 5-325 mg every 6 hours as needed for severe pain, intravenous diphenhydramine 25 mg every 6 hours as needed for itchiness, and 5 mL of viscous lidocaine 2% mouth solution 2 times per day (Table 1 - Regimen A). He was also restarted on his home medications, which included oral fluoxetine 20 mg daily. His pain remained largely uncontrolled on this regimen, and the inpatient pain management team was consulted on day 3 of admission.

On initial interview with the pain medicine team, the patient complained of severe genital burning and rectal pain, 7-8/10 in severity, constant and nonradiating pain that responded minimally to oral oxycodone-acetaminophen. Of note, a confidential drug utilization report was performed and revealed that he had not been using any outpatient-controlled substances within the last year. However, the patient acknowledged he had used cocaine and methamphetamine recently before being admitted. He was placed on a multimodal analgesic regimen that included oral oxycodone 5 mg every 6 hours as needed for moderate pain, oral oxycodone 10 mg every 6 hours as needed for severe pain, intravenous ketorolac 15 mg every 6 hours as scheduled, oral gabapentin 100 mg every 8 hours as scheduled, oral acetaminophen 975 mg every 8 hours as scheduled (with a plan to monitor liver function), 5 mL of 2% viscous lidocaine mouth solution 2 times daily, and 2% lidocaine jelly as needed for perineal pain (Table 1 - Regimen B). On the following day, his pain was described as 3 out of 10, a vast improvement from the prior day. He was slowly able to tolerate solid food and had significantly less pain with defecation and urination. The inpatient pain management team maintained the regimen for 2 more days until the patient left against medical advice.

DISCUSSION

A systematic review and meta-analysis from 12 studies performed by Benites-Zapata et al (4) found that the most common location of mpox rashes is at the anogenital region, present in 73% of patients. Lesions of

the oropharyngeal region were seen in about 10% of patients (4). Even though these cutaneous rashes of mpox infection have been well described in the literature, successful treatment of the oral manifestations this patient displayed have been rarely documented (5).

Per recommendation from the New York Department of Health, antihistamines are endorsed for pruritus from mpox. For anorectal or genital lesions, topical lidocaine is recommended. A warm sitz bath may also prove beneficial for treatment of anal lesions (6). Proctitis is a common complication from mpox infection that can cause severe pain during defecation. A stool softener is suggested for use early in proctitis, especially in the setting of opioid use, given the increased possibility of constipation. Dibucaine ointment or lidocaine gel can be used for pain relief as well. Gabapentin or opioids are recommended for severe pain from proctitis.

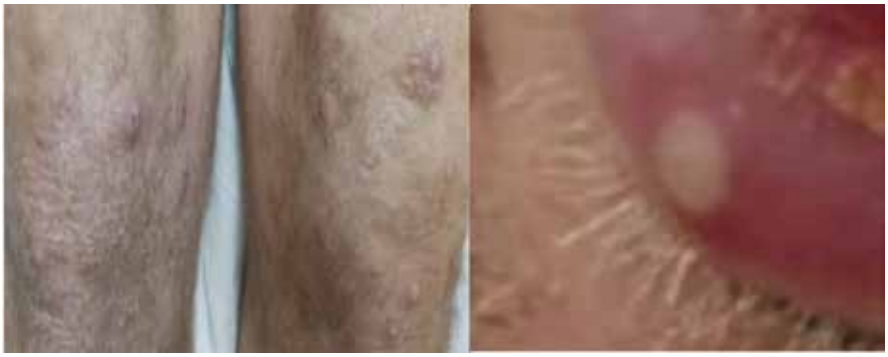

Fig. 2. The patient's knees (left) and lower lip (right) on day one of admission.

Table 1 - Regimen A was prescribed by the primary team on day 1 of admission. Regimen B was recommended by the pain management team on day 3 of admission, which successfully reduced the mpox rash pain in this patient.

Medications	Regimen A	Regimen B
2% Viscous Lidocaine	5 mL BID for mouth and perineal pain	5 mL BID for mouth solution
2% Jelly Lidocaine		BID PRN for perineal pain
Diphenhydramine	25 mg Q6H PRN for itchiness	
Gabapentin		100 mg Q8H scheduled
Acetaminophen	975 mg Q8H PRN for mild pain	975 mg Q8H scheduled
Ketorolac	15 mg Q6H PRN for moderate pain	15 mg Q6H scheduled
Oxycodone-Acetaminophen	5-325 mg Q6H PRN for severe pain	
Oxycodone		5 mg Q6H PRN for moderate pain 10 mg Q6H PRN for severe pain

BID: twice a day, Q6H: every 6 hours, Q8H: every 8 hours, PRN: as needed

Mpox patients who are on brincidofovir have been found to have elevated liver enzymes (7). Medical providers should be cognizant of medications that may further affect liver function, such as antiretroviral therapy for HIV/AIDS or acetaminophen for analgesia.

We recommend the use of multimodal analgesia to effectively treat moderate to severe pain resulting from mpox infections. We found that viscous lidocaine for the treatment of painful oral lesions provided significant temporary relief that helped facilitate diet progression. Acetaminophen can be used as an adjuvant for mild to severe mpox rash pain with close monitoring of liver function. Nonsteroidal antiinflammatory drugs (NSAIDs), in combination with anticonvulsants such as gabapentin or pregabalin, should be considered as well. Oral and intravenous opioids are typically reserved for severe pain, not ameliorated by nonopioid analgesics and can be considered for short-term use. The use of serotonin norepinephrine reuptake inhibitors (SNRIs) may prove helpful in treating mpox related pain, though more data are needed. The implementation of SNRIs should be performed cautiously, given the possible serotonergic interactions between certain opioids that may precipitate serotonin syndrome (8). Research efforts should be dedicated to determining optimal treatment guidelines.

CONCLUSION

This case report introduces an effective multimodal approach for control of mpox related lesions. Overall, there is a paucity of studied and proven effective treatments for painful mpox rashes. For the management of severe rash pain secondary to mpox, a regimen utilizing viscous and/or jelly lidocaine, acetaminophen, gabapentin, NSAIDs, such as ketorolac, and opioids, such as oxycodone may prove efficacious.

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