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General

Suzetrigine for Cancer-Related Bone Pain: A Three-Patient Case Series

Jamal Hasoon[1], Anvinh Nguyen[2], Ranganathan Govindaraj[3], Christopher L Robinson[4]

[1] Department of Anesthesiology, Critical Care, and Pain Medicine, The University of Texas Health Science Center at Houston, [2] Department of Anesthesiology, Baylor College of Medicine, [3] The University of Texas Health Science Center at Houston, [4] The Johns Hopkins University School of Medicine

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Cancer-related bone pain remains a clinical challenge, particularly in patients with metastatic disease who have failed conventional pharmacologic therapies. Suzetrigine, a selective NaV1.8 sodium channel inhibitor, is a novel non-opioid analgesic with potential utility in nociceptive and neuropathic pain states. However, its role in advanced cancer-related pain remains unclear. We present a three-patient case series evaluating suzetrigine in patients with metastatic cancer involving the spine. All patients had extensive prior treatment histories, including opioid therapy, and demonstrated no meaningful improvement in pain following a three-week trial of suzetrigine. Treatment was discontinued due to lack of efficacy, and in one case, cost was also a contributing factor. No adverse effects were reported. These findings highlight potential limitations of suzetrigine in advanced cancer-related bone pain, particularly in opioid-tolerant patients.

INTRODUCTION

Cancer-related pain, particularly in the setting of osseous metastases, is often severe and difficult to manage. Bone metastases can lead to a combination of nociceptive, inflammatory, and neuropathic pain, often requiring multimodal treatment strategies.[1-3] Opioids remain an important component of therapy in cancer patients.[4,5] However, many patients continue to experience significant pain despite escalating doses, and adverse effects may limit further titration.[6]

Suzetrigine, a selective NaV1.8 sodium channel inhibitor, is a newer analgesic targeting peripheral nociceptive signaling. NaV1.8 channels are predominantly expressed in peripheral sensory neurons and are implicated in pain transmission.[7,8] Early studies have demonstrated efficacy in acute pain models and select chronic pain conditions, generating interest in its potential application as a non-opioid analgesic.[9] clinical interest in suzetrigine has expanded, with increasing off-label use and ongoing investigation across a range of chronic pain conditions.[10,11]

Despite this promise, data on suzetrigine in cancer-related pain remain limited. This case series evaluates the real-world use of suzetrigine in three patients with metastatic cancer involving the spine.

CASE PRESENTATION

Three male patients with advanced metastatic cancer involving the spine were treated with suzetrigine for refractory pain following failure of multiple conventional therapies.

The first patient, a male in his 70s with metastatic prostate cancer involving the spine and ilium, presented with persistent, severe pain despite prior treatment with NSAIDs and gabapentinoids. He was maintained on hydrocodone at approximately 30 morphine milligram equivalents (MME) daily. Suzetrigine was initiated, but after three weeks of therapy, the patient reported minimal to no improvement in pain. Cost was also identified as a barrier, as the medication was not covered by his pharmacy plan. Treatment was discontinued due to both lack of efficacy and financial burden. No adverse effects were reported.

The second patient, a male in his 60s with metastatic lung cancer involving the spine and brain, presented with severe, refractory pain despite treatment with NSAIDs, gabapentinoids, and duloxetine. He was maintained on a fentanyl patch and hydrocodone totaling approximately 110 MME daily. Suzetrigine was trialed as an adjunctive therapy. After three weeks, the patient reported no meaningful improvement in pain and the medication was discontinued. No adverse effects were noted. The patient's disease progressed, and he ultimately transitioned to hospice care.

The third patient, a male in his 60s with metastatic prostate cancer involving the spine and ilium, presented with chronic pain refractory to NSAIDs and gabapentinoids. He was maintained on acetaminophen-codeine at approximately 45 MME daily. Suzetrigine was initiated and continued for three weeks. The patient reported minimal improvement in pain symptoms and elected to discontinue

Table 1. Patient Characteristics and Outcomes

Patient	Age/ Sex	Cancer Type	Metastases	Prior Failed Therapies	Opioid Use	Outcome
1	70s/M	Prostate	Spine, ilium	NSAIDs, gabapentinoids	Hydrocodone (30 MME)	Discontinued (cost + no efficacy)
2	60s/M	Lung	Spine, brain	NSAIDs, gabapentinoids, duloxetine	Fentanyl + hydrocodone (110 MME)	Discontinued (no efficacy; hospice)
3	60s/M	Prostate	Spine, ilium	NSAIDs, gabapentinoids	Acetaminophen-codeine (45 MME)	Discontinued (no efficacy)

therapy due to lack of efficacy. No adverse effects were reported.

Across all three patients, no clinically meaningful pain reduction was observed, and no side effects or tolerability issues were reported. Outcomes are reported in table 1.

DISCUSSION

This case series demonstrates lack of efficacy of suzetrigine in three patients with advanced metastatic cancer-related bone pain. Despite differences in primary malignancy, opioid burden, and prior therapies, all patients failed to achieve meaningful pain relief following a three-week trial.

These findings suggest that suzetrigine may have limited utility in advanced cancer-related bone pain, particularly in opioid-tolerant patients. The pathophysiology of metastatic bone pain is complex and involves inflammatory cytokines, osteolytic activity, nerve compression, and central sensitization.[12-14] While NaV1.8 inhibition may reduce peripheral nociceptive signaling, it is likely insufficient to address the multifactorial drivers of pain in this population.

All patients in this series were receiving opioid therapy, with one patient on high-dose opioids exceeding 100 MME daily. It is possible that in opioid-tolerant patients with advanced disease, peripheral sodium channel modulation provides minimal incremental benefit. Additionally, the rapid disease progression seen in metastatic cancer may further limit the ability to observe therapeutic benefit from newer agents.

Notably, no adverse effects were observed in any patient, reinforcing the favorable safety profile of suzetrigine. However, tolerability alone is insufficient in the absence of efficacy in patients with severe and life-limiting pain.

Cost was identified as a barrier in one patient, highlighting the real-world challenges associated with newer analgesic agents that lack widespread insurance coverage. Even if modest benefit were observed, cost considerations may still limit clinical utility.

Taken together, these cases suggest that while suzetrigine represents an important advancement in non-opioid analgesics, its role in advanced metastatic cancer pain appears limited. Future studies should focus on earlier-stage disease and opioid-naïve populations. This case series is limited by small sample size, short duration of therapy, and lack of standardized pain scoring metrics as it was subjective to patient reported benefit. Additionally, the advanced disease state of these patients may limit generalizability.

CONCLUSIONS

Suzetrigine did not demonstrate meaningful analgesic benefit in three patients with metastatic cancer-related bone pain, all of whom were receiving opioid therapy. While well tolerated, its efficacy in this population appears limited. Though we did not see any meaningful pain relief, we acknowledge that the dosing may be different for cancer related pain, and welcome larger RCTs for cancer related pain populations. Further research is needed to better define its role in cancer pain management and identify patient populations most likely to benefit.

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