

General

Clinical Responses to Cocaine-Positive Urine Drug Screens in Patients Receiving Chronic Opioid Therapy: A Four-Patient Case Series

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Background

Urine drug screening (UDS) is commonly incorporated into the monitoring of patients receiving chronic opioid therapy for noncancer pain. Detection of an illicit substance such as cocaine creates a challenging clinical situation because continuation of full μ -opioid agonist therapy may carry increased risk, while abrupt or reflexive discontinuation may also have unintended consequences. There is limited literature describing how clinicians modify chronic opioid therapy following cocaine-positive UDS results.

Case Series

We describe four patients receiving chronic opioid therapy who were found to have cocaine-positive UDS results. Two patients receiving hydrocodone/acetaminophen were gradually weaned from opioid therapy and opioids were subsequently discontinued. A third patient receiving hydrocodone/acetaminophen was transitioned to buprenorphine/naloxone 2 mg twice daily as an alternative to continued full agonist opioid therapy. A fourth patient with a history of substance misuse and prior spine surgery was offered transition to buprenorphine/naloxone but declined and elected not to continue care with the practice.

Conclusion

Cocaine-positive UDS results may substantially alter chronic opioid prescribing. Management may include increased monitoring, gradual discontinuation of full agonist opioids, or consideration of buprenorphine-based therapy in appropriately selected patients. These cases emphasize the importance of individualized risk assessment rather than a uniform response to an unexpected UDS result.

INTRODUCTION

Chronic opioid therapy remains an option for selected patients with persistent noncancer pain, although concerns regarding medication misuse, overdose, substance use, and other opioid-related harms have led to increased emphasis on structured monitoring.^{1,2} Urine drug screening or monitoring is frequently incorporated into chronic opioid prescribing programs and may be used alongside treatment agreements, prescription monitoring programs, clinical assessment, and evaluation for aberrant medication-related behaviors.^{2,3} Studies evaluating patients receiving chronic opioid therapy have demonstrated that unexpected UDS findings are not uncommon.⁴⁻⁶

Urine drug testing can provide objective information regarding exposure to prescribed and nonprescribed sub-

stances; however, appropriate interpretation requires an understanding of test characteristics, drug metabolism, detection windows, and the distinction between screening and confirmatory testing.⁷ Consensus recommendations have therefore emphasized that UDS should be incorporated into a broader clinical risk-assessment strategy rather than interpreted in isolation.⁸

Detection of cocaine during chronic opioid therapy presents a particularly difficult management decision. Continued prescribing of full agonist opioids in the setting of ongoing illicit substance use may raise concerns regarding polysubstance use, treatment adherence, and overall medication safety. Conversely, an unexpected UDS result does not by itself establish opioid use disorder or dictate a single management strategy. The 2022 CDC Clinical Practice Guideline explicitly advises against reflexive dismissal,

recommending clinicians weigh benefits vs. risks, increase monitoring frequency, offer naloxone, and ensure SUD treatment when opioids are continued.⁹ We present four patients receiving chronic opioid therapy in whom cocaine-positive UDS findings resulted in modification or discontinuation of opioid treatment.

CASE PRESENTATIONS

CASE 1

A male patient with chronic knee pain following total knee replacement had been maintained on hydrocodone/acetaminophen 10 mg/325 mg four times daily for chronic pain management. During routine monitoring, a UDS was positive for cocaine. Subsequent urine testing again demonstrated cocaine exposure, resulting in two separate cocaine-positive UDS results.

Given the repeated unexpected findings and concern regarding the safety of continuing full agonist opioid therapy in the setting of ongoing illicit substance use, the risks and benefits of continued opioid treatment were reassessed. Hydrocodone/acetaminophen was gradually weaned and ultimately discontinued. Long-term full agonist opioid therapy was not resumed.

CASE 2

A male patient with chronic pain associated with spinal stenosis was receiving hydrocodone/acetaminophen 10 mg/325 mg three times daily. Routine UDS demonstrated cocaine exposure.

The unexpected result prompted reassessment of the patient's suitability for continued chronic full agonist opioid therapy. Given the increased risk associated with continued opioid prescribing in the setting of illicit substance use, hydrocodone/acetaminophen was gradually tapered and subsequently discontinued.

CASE 3

A male patient with rheumatoid arthritis and chronic pain was receiving hydrocodone/acetaminophen 10 mg/325 mg four times daily. UDS performed as part of chronic opioid monitoring was positive for cocaine.

Rather than continuing full agonist opioid therapy, alternative treatment strategies were discussed. The patient's hydrocodone regimen was discontinued and he was transitioned to buprenorphine/naloxone 2 mg/0.5 mg twice daily. The transition allowed continued use of an opioid-based pharmacologic strategy while avoiding ongoing treatment with hydrocodone in a patient considered to have an elevated substance-related risk profile.

CASE 4

A female patient with chronic pain following prior spine surgery and a documented history of substance misuse was receiving chronic opioid therapy with oxycodone 10mg four

to five times daily. UDS subsequently demonstrated cocaine exposure.

Because of her history and the unexpected UDS result, continued treatment with a conventional full agonist opioid was considered to carry an unfavorable risk profile. Transition to buprenorphine/naloxone was offered as an alternative strategy. The patient declined buprenorphine/naloxone and elected not to continue treatment with the practice.

DISCUSSION

This four-patient case series illustrates several potential clinical responses to cocaine-positive UDS results among patients receiving chronic opioid therapy. In all four patients, detection of cocaine altered the treating clinician's assessment of the appropriateness of continued conventional full agonist opioid prescribing. However, management was individualized rather than uniform.

Unexpected UDS findings can create difficult clinical decisions. Determining whether opioid therapy should be continued or discontinued after an abnormal UDS requires consideration of the clinical circumstances, reliability of the test result, patient behavior, and overall balance of benefits and harms.^{9,10} The frequency of aberrant findings among chronic pain populations is clinically meaningful. A systematic review by Fishbain and colleagues found evidence of illicit drug detection and other aberrant drug-related behaviors among subsets of patients receiving chronic opioid therapy, illustrating that these findings are encountered in routine pain practice.¹¹

The detection of cocaine may be particularly concerning in patients receiving controlled medications. A history of substance misuse or concurrent use of illicit substances is an established risk factor when assessing the safety of long-term opioid therapy, and contemporary opioid risk-management strategies emphasize multimodal assessment rather than reliance on a single screening instrument or laboratory result.¹² Nevertheless, a cocaine-positive UDS should be interpreted as a marker of increased clinical risk rather than proof of opioid misuse or opioid use disorder. Open discussion with the patient regarding the results and clinical decision making regarding the risks and benefits of continuing or discontinuing opioid therapy need to be considered by the prescribing physician.

Cases 1 and 2 demonstrate one approach in which full agonist opioid therapy was gradually tapered and discontinued. Importantly, these patients were not described as undergoing abrupt opioid termination. When the clinician determines that the potential risks of continued opioid therapy exceed its benefits, a structured taper may allow discontinuation while limiting withdrawal symptoms and providing an opportunity to transition toward nonopioid or interventional pain-management strategies.

Case 3 demonstrates an alternative strategy. The patient was transitioned from hydrocodone/acetaminophen to buprenorphine/naloxone rather than having opioid pharmacotherapy eliminated entirely. Chronic pain and substance use disorders frequently coexist and may substantially complicate analgesic management.¹³ Buprenorphine

Table 1. Summary of Cases

Case	Sex	Primary Pain Condition	Baseline Opioid Therapy	UDS Finding	Management
1	Male	Chronic knee pain after total knee replacement	Hydrocodone/acetaminophen 10/325 mg QID	Cocaine positive on 2 UDS	Opioid tapered and discontinued
2	Male	Spinal stenosis	Hydrocodone/acetaminophen 10/325 mg TID	Cocaine positive	Opioid tapered and discontinued
3	Male	Rheumatoid arthritis	Hydrocodone/acetaminophen 10/325 mg QID	Cocaine positive	Transitioned to buprenorphine/naloxone 2/0.5 mg BID
4	Female	Chronic pain after spine surgery	Oxycodone 10 mg 4–5 times daily	Cocaine positive	Buprenorphine/naloxone offered; patient declined and left practice

is well established for the treatment of opioid use disorder and has pharmacologic characteristics that distinguish it from conventional full μ -opioid receptor agonists.¹⁴

Buprenorphine has also received increasing attention as an analgesic option for patients with chronic pain, particularly when clinicians are concerned about the risks associated with conventional full agonist opioids.^{15,16} A systematic review and meta-analysis of randomized trials found that buprenorphine was associated with a statistically significant, although modest, reduction in pain intensity in chronic noncancer pain populations.¹⁷ These data provide support for the analgesic properties of buprenorphine, although the evidence varies according to formulation and patient population.¹⁸

The use of buprenorphine/naloxone in Case 3 should not be interpreted as treatment for cocaine use. Buprenorphine does not constitute established pharmacotherapy for cocaine use disorder. Furthermore, a cocaine-positive UDS alone is insufficient to establish an indication for medication treatment of opioid use disorder. Rather, in this case, buprenorphine/naloxone represented an individualized strategy chosen to avoid continued hydrocodone therapy in a patient considered at elevated risk while preserving an opioid-based approach to pain management. Formal evaluation for opioid use disorder should be performed whenever clinically suspected.

Case 4 further highlights the importance of patient participation in risk-reduction strategies. Following the cocaine-positive UDS, continued full agonist therapy was considered inappropriate, and buprenorphine/naloxone was offered as an alternative. The patient declined this treatment and elected to leave the practice. This case demonstrates that clinicians may offer alternative pharmacologic strategies, but their implementation ultimately requires patient acceptance and engagement.

Another important consideration is verification and interpretation of unexpected toxicology results. UDS assays have limitations, and results with significant consequences for treatment should be interpreted within the context of the specific assay, prescribed medications, clinical history, and, when appropriate, confirmatory testing.^{4,5,7} Clinicians should also discuss unexpected findings directly with patients before making major changes whenever feasible.

Collectively, these four cases suggest a practical framework following detection of cocaine during chronic opioid therapy: reassess the reliability and clinical context of the UDS finding; discuss the finding with the patient; reevaluate the risks and benefits of continued full agonist therapy; assess for substance use disorders when indicated; consider increased monitoring and risk mitigation; and determine whether gradual opioid discontinuation, transition to an alternative such as buprenorphine, or another treatment strategy is most appropriate.

This case series has several limitations. It includes only four patients and is descriptive in nature, and standardized pain, functional, substance-use, and long-term follow-up outcomes were not available. Accordingly, these cases cannot establish the superiority of opioid discontinuation, transition to buprenorphine/naloxone, or any other specific management strategy following a cocaine-positive UDS. Rather, the purpose of this case series is to provide real-world examples of how clinicians may approach these difficult and complex scenarios, particularly given the limited literature addressing management of patients receiving chronic opioid therapy who are subsequently found to have cocaine-positive UDS results. The management decisions described reflect individualized clinical judgment based on each patient's history, risk profile, treatment preferences, and overall clinical context and should not be interpreted as a universal treatment protocol.

CONCLUSION

Cocaine-positive urine drug screening can substantially alter the risk-benefit assessment of chronic opioid therapy. In this four-patient series, two patients underwent gradual discontinuation of hydrocodone, one was transitioned from hydrocodone to buprenorphine/naloxone, and one was offered buprenorphine/naloxone but declined treatment and left the practice. These cases demonstrate that cocaine-positive UDS results may appropriately prompt reconsideration of continued full agonist opioid therapy while also illustrating that management need not be uniform.

An unexpected cocaine-positive UDS should be considered a significant clinical risk marker, but treatment de-

cisions should incorporate test interpretation, patient history, discussion with the patient, assessment for substance use disorders, and the overall benefits and risks of continued opioid therapy. Buprenorphine-based treatment may represent an alternative to conventional full agonist opioids in selected high-risk patients, although its use should

be individualized and should not be interpreted as specific treatment for cocaine use.

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