



The Pain Clinic

*A Multidisciplinary
Approach to Acute
& Chronic Pain
Management*

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Controlling Breakthrough Pain in Chronic Pain States
Pain Management Update*

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Controlling Breakthrough Pain in Chronic Pain States

In chronic pain states, breakthrough pain is inevitable; therefore, any pain management plan must acknowledge and prepare for it.

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The mutual goal of physician and patient in managing chronic pain should be to *gain control over the pain*. Because there is no cure for chronic pain, it is not realistic to expect a pain-free state. Setting unrealistic goals creates disappointment and a sense of failure for patients, their loved ones, and their physicians. Even with the best pain control plan, "breakthrough" pain is inevitable. The pain patient should be made to understand that (1) breakthrough pain is normal, and (2) breakthrough pain should not be considered a sign of failure. The goal of pain management should be to restore the patient's function and enhance quality of life to a mutually acceptable point.

The key to controlling breakthrough pain is to minimize the frequency, severity, and duration of each breakthrough episode with the intention of lowering the pain level to baseline as quickly as possible.¹ It is important to control breakthrough pain and return to the baseline to allow around-the-clock (ATC) opioids to continue working. If it is not controlled or the treatment is not

allowed, the patient may live in fear of an exacerbation of pain and limit activity.² Patients must have some control over pain in their lives; pain should not be allowed to take control.

BASELINE PAIN

An ATC opioid offers the best control over chronic pain; nonetheless, it is not possible to relieve all of the pain all of the time. Medications prescribed as needed cause peaks and valleys of overmedication followed by inadequate analgesia.³ Nonsteroidal anti-inflammatory drugs (NSAIDs) and short-acting opioids are not safe for chronic daily use.¹ The goal of an ATC is to maintain steady pain control without peaks and troughs in the blood levels and to simplify the regimen to ensure compliance.

Breakthrough episodes are not an indication of poorly controlled or uncontrolled pain; however, it is important to distinguish between breakthrough pain and uncontrolled pain.² The purpose of the ATC is voided if a daily rescue medication is required. First, pain control must be reached with an ATC or nonopioid,

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such as an antiepileptic drug (AED). Rescue medication may then be used when pain increases beyond the baseline.⁴ The baseline is established by titrating the ATC medication until an acceptable pain level is reached or no further improvement occurs with escalating doses. The baseline will differ for every patient, since pain tolerance varies between patients and by unique factors associated with chronic pain. As depression, anxiety, sexual dysfunction, insomnia, and fatigue are treated and improve, many patients can tolerate higher levels of pain. Therefore, the baseline level should be periodically reassessed.

PSYCHOLOGICAL CONSIDERATIONS

To decrease patients' anxiety and fear of recurring pain, short-acting opioids should be provided for breakthrough episodes; however, worry over the effectiveness of a short-acting medication or fear of not having

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enough medication can increase a patient's anxiety. Fear of pain has a greater negative impact on quality of life than the severity of pain or the patient's functional status. The fear of pain actually increases attention to pain and can decrease tolerance of it.⁵ Providing an ATC, along with short-acting opioids for breakthrough pain, can help reduce a patient's fear of recurring pain.⁶

TYPES OF BREAKTHROUGH PAIN

There are several types of breakthrough pain: incident, idiopathic, and end-of-dose. Incident breakthrough pain occurs when an activity or circumstance causes pain to rise above the baseline.² If patients are aware of the triggers, they should be instructed to take the breakthrough medication in anticipation of pain, allowing the medication to reach serum levels before an activity or circumstance actually results in pain. Short-acting medications should be taken 30 minutes before a potentially pain-causing activity.

Idiopathic breakthrough pain cannot be predicted.² In this situation, a rapid-acting pain medication such as the Actiq fentanyl lollipop, provided on an outpatient basis, can be helpful.

End-of-dose failure occurs when the ATC does not last until the next dosing time.

TREATMENTS FOR BREAKTHROUGH PAIN

With all three types of breakthrough pain, frequency should be taken into

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consideration. If the patient experiences breakthrough pain more than three times a week, the ATC medication should be increased, taking into consideration the adverse effects of the ATC. As the dose is increased, sedation, constipation, and dizziness will also increase.² The goal is improved quality of life and control over pain. If an increase in the ATC causes sedation such that activities are limited, other factors of the chronic pain syndrome will worsen and the patient's function will continue to decrease. Conversely, if the ATC is increased and the adverse effects are minimal, the patient's level of activity and quality of life will improve.

For end-of-dose failures, the options in order of importance include: (1) increasing the ATC dose; (2) switching to a different ATC, preferably one with a longer action (eg, switch from OxyContin to the fentanyl patch); (3) decreasing the dosing interval (eg, increase from bid to tid); and (4) providing a rescue dose at the point of failure.⁴ The last option is the least desirable.

PRESCRIBING OPIOIDS

Long-acting opioids are not appropriate for use as rescue medication; Short-acting opioids are not appropriate for extended periods of time. When it has been determined that a pain management plan should incorporate opioids, control over chronic

pain is best accomplished by combining an ATC opioid with a short-acting opioid for rescue. Avoid pain rescue using two long-acting opioids or using a short-acting opioid in place of an ATC and rescuing with another short-acting opioid. Doing so would increase the risk of overdose and provide ineffective pain relief.

The patient should be given a scheduled long-acting pain medication to control the baseline pain and then provided an *appropriate* breakthrough treatment. In addition, the patient and family should receive education on the appropriate use of all medications as well as when to seek professional care for inappropriate levels of pain.

Patients should be instructed on the appropriate dosing of breakthrough pain medication. Patients are often placed on a long-acting medication and instructed to take very low doses of a short-acting opioid. This causes fear and frustration since the pain is not adequately dosed. This practice actually increases the risk of overdose and addiction. The patient is likely to increase medication without knowing dosing schedules or the dangers of overdosing or drug interactions. The dose of the breakthrough opioid should be 20% of the long-acting dose. For example, if OxyContin 80 mg bid was prescribed, providing two 10-mg tablets of Vicodin would be an appropriate breakthrough dose.

Combining different opioids is inappropriate. Although there are subtle differences between α -receptor opioids, it is unrealistic to expect that someone taking hydrocodone will benefit more by adding codeine than by doubling the dose. ATCs are equivalent. If pain is incompletely controlled on one dose of an ATC,



increase the dose. Adding a second ATC will only increase the side effects and drug-drug interactions. For example, Duragesic 50 µg plus OxyContin 40 mg bid is not more effective than Duragesic 100 µg alone or OxyContin 80 mg bid alone. It is not true that that two opioids are better than one or that a lower dose of each is safer than a higher dose of one.

A patient with chronic pain can be prescribed an ATC in three different scenarios: (1) Overmedicating with the goal of having no pain, eg, a patient who experiences breakthrough pain on OxyContin 40 mg bid increases medication to 80 mg bid. Breakthrough is minimal, but more medication is prescribed than is needed for baseline control and the risk of side effects increases. (2) Providing a low-dose ATC for multiple breakthrough treatments. This patient would be prescribed OxyContin 20 mg bid and Lortab qid. The patient receives the same medication as if prescribed OxyContin 40 mg, but must treat breakthroughs throughout the day. This can lead to addiction while the pain remains uncontrolled. (3) Prescribe enough ATC to give control 90% of the time and then a medication for the inevitable breakthrough pain. In this case, the patient is neither overmedicated nor undertreated. If the ATC does not control the pain sufficiently to limit breakthrough pain to no more than one or two episodes per day, increase the baseline medication. The other consideration is the pattern of the breakthrough. If the patient experiences pain at a specific time every day, consider prescribing a short-acting opioid routinely before the breakthrough pain is likely to

occur. Then examine the ATC medication coverage required to alter the amount or frequency of the dose.

The short-acting opioid should be limited to the lowest possible dosage. Opioids can cause depression, hyperanalgesia, decreased delta-wave sleep, and constipation. In one study, an increase in unemployment rates was noted among chronic opioid users compared with chronic pain patients who did not use opioids.⁷ Cognitive changes can occur with increased doses of rescue medication; however, tolerance of cognitive changes occurs with chronic stable doses of long-acting opioids.⁸

Prescribing for Breakthrough Pain

How much breakthrough medication will a patient use in 1 month? The answer is ALL THAT IS PRESCRIBED. Most patients will either have used all of the medication or will not admit to having any extra at the end of the month. Since there is no certainty as to how many episodes of breakthrough pain will occur in a given month, it is difficult to know how many tablets to prescribe. The patient will want to treat every episode; however, a patient cannot be given an unlimited amount of opioids. There are several problems associated with providing large amounts of breakthrough medication: (1) It requires the guidance of a physician. (2) Patients will use the breakthrough medication attempting unsuccessfully to lower the baseline. (3) Patients will hoard medication for fear of not being able to obtain the drug in the future.⁹ (4) Having more medication than needed will increase the risk of drug diversion, overdosing, and adverse events.

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Patients are not usually given total control over how much medication they take. A diabetic may be allowed to treat elevations of blood sugar with increased amounts of insulin, but this is accompanied by strict guidelines and a limited supply of insulin. The same is true with the treatment of asthma, epilepsy, or any other disease entailing intermittent episodes or exacerbations. It would be inappropriate for an asthmatic to be given instruction to use albuterol every time shortness breath occurs without being given treatment guidelines or considering therapeutic alternatives. It is important to treat pain with the same standards used for other diseases.

Initially provide a maximum of three treatments for breakthrough pain per week. This amount should be adjusted the following month as required. The idea is to limit the total number of breakthroughs. If more breakthrough medication is required, slightly increase the breakthrough treatment. The increase can be made by a single dose to enhance control of individual episodes of breakthrough pain. If the number of breakthrough episodes increases daily, add the dose to the ATC. Keep in mind that the overall goal is three or fewer episodes per week. Continue treating breakthroughs until they stabilize in number and then add those increased number of doses to the overall regimen. Treat each breakthrough episode as it occurs, and monitor continually

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to determine if medications should be increased or decreased.

Establishing an acceptable number of breakthrough medications goes back to the same principle used to initiate an ATC.⁹ In the opioid-naïve patient, start with a short-acting opioid. When pain is controlled, total the dosage of short-acting opioids required and convert to an ATC. For example, hydrocodone 10 mg every 4 hours is equal to OxyContin 10 mg twice daily. If the patient is taking OxyContin 10 mg bid and treating breakthrough with OxyIR 10 mg bid, the best treatment would be to convert to OxyContin 20 mg bid. The mistake is using an ATC and adding breakthrough pain medication in an unlimited fashion and failing to adjust the ATC.

PATIENT EDUCATION

Patients should understand and participate fully in the pain control plan. The goal should be clear that pain will not be eliminated, but controlled. Patients should understand that pain should not be feared since they will be given appropriate tools for controlling it. The ATC should be explained as a routine, scheduled medication that is taken at nearly the same time each day. It should be emphasized that it is not an as-needed medication. The short-acting opioids provided for breakthrough pain should be taken in anticipation of a usually painful activity or when pain begins to permit quick control over the pain. The patient should be instructed to take the rescue medication whenever pain occurs, even if it means simultaneous dosing with the ATC medication.⁴

PAIN TOLERANCE

When establishing a baseline for acceptable pain, patients should be involved in setting goals. It is important for patients to understand that when all curative procedures and treatments have been exhausted and the pain remains, a pain-free state will not be possible. A common response will be, "You mean, I have to live with pain?" The appropriate answer is "Yes, to some extent. I would like to work with you to find the amount of pain you can accept and still be a productive, fully functional member of society. Together we will find a treatment to meet this goal." This realistic approach teaches acceptance and usually has favorable outcomes.

Avoiding all pain and all pain-related behaviors can lead to depression and disability. Accepting chronic pain can lessen pain intensity, pain-related anxiety and avoidance, depression, and disability, and will increase daily uptime and the patient's ability to work.¹⁰ Attempting to eliminate pain entirely will only lead to failure and disappointment. Some patients may find it difficult to accept that they will never be pain-free and that a cure is unlikely.¹¹ Ensure patients understand that finding the right medication and the right dose takes time. Mutual agreement toward this goal is important.

Many physicians feel they have failed if their patients still experience pain; however, patients must decide what level of pain they can tolerate. If a patient can accept a level of pain described as 5 out of 10, pursuing further decreases in pain will needlessly increase both the expense and

the risk of side effects.

SUMMARY

Breakthrough pain is inevitable in chronic pain management. Consequently, it is essential to establish an acceptable level baseline of pain that restores the patient's ability to function and enhances their quality of life. It is also important to explain that it is usually not possible to relieve chronic pain totally. Give patients ATC opioids with short-acting rescue opioids as needed and set a mutually agreed upon goal of the number of breakthrough episodes per week.

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