Managing Breakthrough Cancer Pain in Palliative Care

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The management of cancer-related pain raises important challenges for nurses. Guidelines and recommendations from various palliative care organisations are being updated to help nurses distinguish between the different categories of pain and administer the relevant medication.

Approximately 70-90% of patients with advanced cancer are reported to have pain.[1] It is therefore imperative that nurses have a sound understanding of cancer pain and knowledge of how to assess and manage it. Central to this, is appreciating two distinct types of cancer pain. One is 'background pain', which is a continuous/ persistent type of pain, requiring around-the-clock medication to provide relief (Fig.1). The other is 'breakthrough pain' which is prevalent among 40-80% of oncology patients.[2]

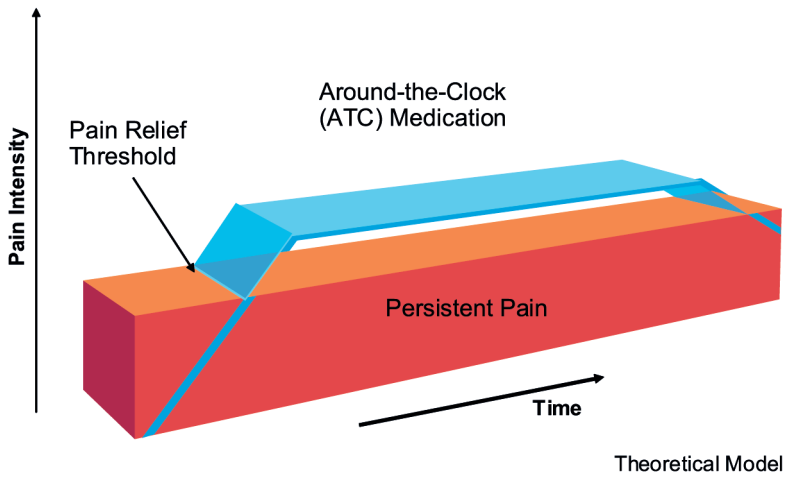
WHAT IS 'BREAKTHROUGH PAIN'?

As there is no widely accepted definition for breakthrough pain within clinical practice and the literature,[3] confusion still exists regarding what it really is. The Association for Palliative Medicine of Great Britain and Ireland (APM) recently published evidence-based, practical clinical guidelines for the management of cancer-related breakthrough pain.[3] Revising earlier definitions, the APM defined breakthrough pain as "a transient exacerbation of pain that occurs either spontaneously, or in relation to a specific predictable or unpredictable trigger,

Table 1: Breakthrough pain questions[3]

Onset of pain?
Frequency of pain?
Site of pain?
Radiation of pain?
Quality (character) of pain?
Intensity (severity) of pain?
Duration of pain?
Exacerbating factors?
Relieving factors?
Response to analgesics?
Response to other interventions?
Associated symptoms?
Interference with activities of daily living?

Fig. 1. Treating persistent background pain



despite relatively stable and adequately controlled background pain"[3] (Fig. 2).

Clinical features

An APM taskforce described breakthrough pain as often multi-faceted. It may be related to a variety of causes (cancer- or treatment-related), and different pain pathophysiologies (nociceptive, neuropathic, or mixed pain).

Breakthrough pain is usually classified as either:

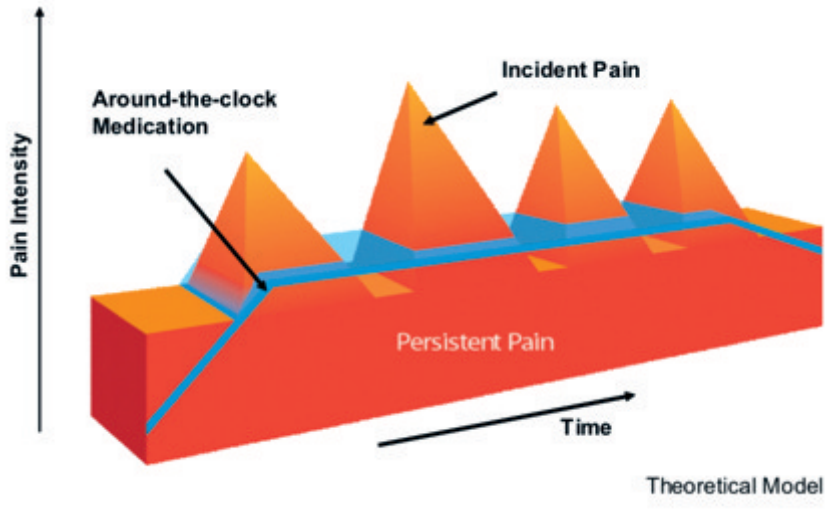
- Spontaneous pain – occurs unexpectedly and so is unpredictable;
- Incident pain – can be related to specific events which may be voluntary (walking), involuntary (coughing) or relate to a procedure (wound care).

Assessment

Using a holistic palliative care approach to assess cancer pain, nurses will appreciate that every patient's pain is a unique subjective experience. Nevertheless, the APM taskforce reports that breakthrough pain often shares the following features:

- occurs frequently (a mean number of four episodes per day);
- has a rapid onset;
- has a short duration (around 30 minutes);
- is moderate to severe in intensity;
- has worse psychological/functional outcomes; and
- has a less positive response to opioid therapy.

Fig.2. Incident pain in cancer



There is no universally accepted cancer pain assessment tool[4] and no validated clinical breakthrough pain assessment tool. Therefore, the APM recommends that standard pain questions are asked in order to determine the clinical features of breakthrough pain (Table 1) and to facilitate individualised pain management. A key recommendation is to differentiate between patients with uncontrolled background pain experiencing transient exacerbations of pain, and patients with controlled background pain experiencing episodes of true breakthrough pain (Fig.3).

Table 2: Summary of the recommendations for the management of cancer-related breakthrough pain[3]

1	Patients with pain should be assessed for the presence of breakthrough pain.
2	Patients with breakthrough pain should have this pain specifically assessed.
3	The management of breakthrough pain should be individualised.
4	Consideration should be given to treatment of the underlying cause of the pain.
5	Consideration should be given to avoidance/treatment of the precipitating factors of the pain.
6	Consideration should be given to modification of the background analgesic regimen/around the clock medication.
7	Opioids are the "rescue medication" of choice in the management of breakthrough pain episodes.
8	The dose of opioid "rescue medication" should be determined by individual titration.
9	Non-pharmacological methods may be useful in the management of breakthrough pain episodes.
10	Non-opioid analgesics may be useful in the management of breakthrough pain episodes.
11	Interventional techniques may be useful in the management of breakthrough pain.
12	Patients with breakthrough pain should have this pain specifically re-assessed.

MANAGEMENT

The optimal management of breakthrough pain requires that the underlying cause of the pain is identified where possible. Pharmacologically, breakthrough pain episodes are typically managed with the use of "rescue medications", which are taken when required, rather than on a regular basis. Normal-release opioids, such as Sevredol or Oramorph, are the most commonly used rescue medication for opioid-responsive pain in Europe. The traditional empirical approach for calculating a rescue dose for breakthrough pain is to first calculate the total 24-hour dose of analgesic

medication. The rescue dose (commonly known as breakthrough dose) is then calculated at one-sixth of this 24-hour dose:

Morphine Sulphate Tablets (MST) 60mg twice daily = 120mg modified-release morphine (total 24-hour dose)

MST 120mg /6 = 20mg normal-release morphine (Sevredol or Oramorph) as rescue dose.

However, it takes 20 to 30 minutes for an oral normal-release opioid to begin to provide pain relief and 60 minutes for it to reach peak effect. This means that a patient with rapid onset and short duration breakthrough pain (around 30 minutes) may not receive adequate, timely pain relief from a typical rescue dose. In addition, the prolonged duration of the effect of the opiate (3–6 hours) can result in adverse effects.

Hence, the APM states that "oral opioids are not the optimal rescue medication for most breakthrough pain episodes".[3] Nevertheless, oral opiods may be considered in the pre-emptive management of voluntary incident pain or procedural pain. If used in these cases, the opioids need to be administered at least 30 minutes in advance of the cause.

Nurses should also consider how best to avoid or treat precipitating factors, such as for example strategies/adaptations to minimise the amount of movement if this is a cause. Common sense would also indicate that, in the case of spontaneous pain or non-voluntary incident pain, the medication should be administered to the patient as soon as the breakthrough pain starts. It is worth remembering however that oral opioids may not begin to relieve the pain for 30 minutes, and the pain may have subsided in the meantime.

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Currently, many new varieties of fentanyl-based products are being promoted for the effective management in breakthrough pain. Fentanyl is a highly lipophilic drug and is quickly distributed into the central nervous system. This results in fast onset/offset of action, so it may more closely mirror the profile of breakthrough cancer pain.

Examples include:

- oral transmucosal fentanyl citrate (OTFC, Actiq);
- fentanyl buccal tablet (Effentora);
- sublingual fentanyl (Abstral) and
- intra-nasal fentanyl spray (Instanyl).

However, a panel of experts recently raised concerns about the lack of robust evidence showing that newer fentanyl products give better relief from breakthrough pain than established medications and they cost considerably more.[5] They welcomed the availability of new agents, but voiced concerns about the lack of experience and of long-term data.

The European Palliative Care Research Collaborative (EPCRC), in collaboration with the European Association for Palliative Care (EAPC), are in the process of updating the World Health Organization[6-8] and EAPC[9] guidelines for the administration of opioids in cancer pain.

It is hoped that an internationally-agreed definition and classification of cancer-related breakthrough pain can be agreed and that a standard approach on how to assess and manage breakthrough pain can be found. Meanwhile, the APM guidelines on breakthrough pain offer nurses practical assistance on the management of breakthrough pain (Table 2). However, it must be remembered that implementation of many of the current APM recommendations is dependent upon nurses defining and assessing breakthrough pain accurately.[10]

Details of the references cited in this article can be accessed at www.cancernurse.eu/communication/eons_newsletter.html

Fig. 3. Increasing ATC medication may increase side effects