Oral Transmucosal Fentanyl Citrate for Cancer Breakthrough Pain: A Review

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Purpose/Objectives: To review the dose titration, efficacy, and safety of oral transmucosal fentanyl citrate (OTFC).

Data Sources: Phase I and II clinical trial abstracts and evidence-based review articles.

Data Synthesis: OTFC has an onset, peak, and duration of action similar to that of an IV dose of an opioid and has been demonstrated to be effective and well tolerated for the management of breakthrough pain in patients with cancer.

Conclusions: Studies of OTFC demonstrate that it is easy to use, noninvasive, effective, safe, and acceptable to patients, caregivers, and healthcare providers. However, OTFC is expensive and approved for use only in opioid-tolerant patients with cancer.

Implications for Nursing: Breakthrough pain in patients with cancer is a common problem with characteristics that make it difficult to treat. Oncology nurses should familiarize themselves with OTFC's unique characteristics to be able to best help patients manage their therapy.

Breakthrough pain is a term used to describe a transitory exacerbation of pain that occurs on a background of otherwise stable pain in patients receiving chronic opioid therapy (Portenoy & Hagen, 1990). By definition, breakthrough pain is typically of rapid and paroxysmal onset and brief duration, reaching peak intensity in 3–52 minutes (Fine & Busch, 1998; Portenoy & Hagen; Portenoy, Payne, & Jacobsen, 1999). Although some debate remains about the precise methods of assessment and diagnosis of breakthrough pain (Bennett et al., 2005a; Mercadante et al., 2002), the prevalence of breakthrough pain is reported to be 51%–86% in patients with cancer (Ashby et al., 1992; Bruera, Fainsinger, MacEachern, & Hanson, 1992; Gomez-Batiste et al., 2002). Three subtypes of breakthrough pain have been defined and include incident pain, idiopathic pain, and end-of-dose failure (see Table 1). The characteristics of breakthrough pain are:

- Oral transmucosal fentanyl citrate (OTFC) is the only opioid specifically formulated for transmucosal delivery.
- OTFC may work best for breakthrough pain that is paroxysmal, severe, and brief.
- A successful dose of OTFC has no predictors, so each patient should be titrated individually.

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