Considerations in selecting rapid-onset opioids for the management of breakthrough pain

Michael Perelman
Suzan Leake

Archimedes Pharma, Bedminster,
NJ, USA

Dear editor

We read with great interest the recent publication by Smith.¹ This article provides a valuable perspective on the selection of an agent to manage breakthrough pain. Smith recognizes the importance of a fast onset-of-action and the identification by Farrar et al² of a 33% (often ≥ 2 point) change in the pain intensity difference as a measure of a 'clinically important improvement'. For these reasons, Smith focuses on the various transmucosal fentanyl formulations that offer a rapid onset and he provides a nice summary of the key features of each of the available products.

Smith¹ also provides some 'advantages and disadvantages' of different routes of administration which can be used to select an appropriate formulation for an individual patient. We agree with much of the commentary presented, but feel that the grouping of dissimilar formulations based on route of administration is potentially too simple. For example, Smith¹ includes two different products in the intranasal route discussion, despite earlier recognition of key formulation differences, and in doing so allocates weaknesses of one formulation to the other. We would like to inform readers of three important points regarding one intranasal fentanyl formulation:

- First, fentanyl pectin nasal spray (Lazanda®/PecFent® Archimedes Development Ltd, Nottingham, UK) includes the unique PecSys® technology that forms a bioadhesive gel on the nasal mucosa, which significantly reduces run-off/drip compared with a simple solution.^{3,4} This means that the fentanyl is retained in the nasal cavity and that variable absorption associated with nasal drip or swallowing is not an issue for fentanyl pectin nasal spray. Other formulations (nasal and oral) explicitly acknowledge in their prescribing information, the potential for variable absorption.^{5,6}
- Secondly, the absorption of fentanyl from fentanyl pectin nasal spray has been specifically studied in patients with rhinitis;⁷ in that setting the absorption of fentanyl was not affected by nasal inflammation (area under the curve from time 0 to time of last quantifiable plasma concentration, area under the curve from time 0 to 1 hour after administration, maximum plasma concentration, and time to maximum plasma concentration) – which by implication suggests that patients with colds or illnesses that result in changes to the nasal mucosa are suitable candidates for fentanyl pectin nasal spray.
- Finally, data from fentanyl pectin nasal spray Phase III trials^{8–10} show that patients did not have difficulty using the spray device; in fact the vast majority reported a high degree of satisfaction.

Correspondence: Suzan Leake
Archimedes Pharma, One Crossroads
Drive, Bedminster, NJ 07921, USA
Email suzanleake@archimedespharma.com

We agree with Smith's conclusions¹ that treatment selections should be based on patient needs, but we felt it important to offer an added perspective on the criteria being used to make such a selection.

Disclosure

MP and SL are currently employed by Archimedes Pharma. The authors report no further conflicts of interest in this work.

References

1. Smith HS. Considerations in selecting rapid-onset opioids for the management of breakthrough pain. *J Pain Res.* 2013;6:189–200.
2. Farrar JT, Berlin JA, Strom BL. Clinically important changes in acute pain outcome measures: a validation study. *J Pain Symptom Manage.* 2003;25(5):406–411.
3. Watts P, Smith A. PecSys: in situ gelling system for optimised nasal drug delivery. *Expert Opin Drug Deliv.* 2009;6:543–552.
4. Castile J, Cheng YH, Simmons B, Perelman M, Smith A, Watts P. Development of in vitro models to demonstrate the ability of PecSys®, an in situ nasal gelling technology, to reduce nasal run-off and drip. *Drug Dev Ind Pharm.* 2013;39(5):816–824.
5. Instanyl (fentanyl citrate) [summary of product characteristics]. Takeda UK Ltd. 2013
6. Actiq (fentanyl citrate) lozenge [prescribing information]. Frazer, PA. Cephalon, Inc;2011
7. Perelman M, Fisher AN, Smith A, Knight A. The impact of allergic rhinitis and its treatment on the pharmacokinetics of nasally administered fentanyl. *Int J Clin Pharmacol Ther.* 2013;51(5):349–356.
8. Taylor D, Galan V, Weinstein SM, et al; Fentanyl Pectin Nasal Spray 043 Study Group. Fentanyl pectin nasal spray in breakthrough cancer pain. *J Support Oncol.* 2010;8(4):184–190.
9. Davies A, Sitte T, Elsner F, et al. Consistency of efficacy, patient acceptability, and nasal tolerability of fentanyl pectin nasal spray compared with immediate-release morphine sulfate in breakthrough cancer pain. *J Pain Symptom Manage.* 2011;41(2):358–366.
10. Radbruch L, Torres LM, Ellershaw JE, et al. Long-term tolerability, efficacy and acceptability of fentanyl pectin nasal spray for breakthrough cancer pain. *Support Care Cancer.* 2012;20:565–573.

Journal of Pain Research

Publish your work in this journal

The Journal of Pain Research is an international, peer-reviewed, open access, online journal that welcomes laboratory and clinical findings in the fields of pain research and the prevention and management of pain. Original research, reviews, symposium reports, hypothesis formation and commentaries are all considered for publication.

Submit your manuscript here: <http://www.dovepress.com/journal-of-pain-research-journal>

Dovepress

The manuscript management system is completely online and includes a very quick and fair peer-review system, which is all easy to use. Visit <http://www.dovepress.com/testimonials.php> to read real quotes from published authors.