



Opioid/naloxone prolonged release combinations for opioid induced constipation

Shailendra Kapoor

Shailendra Kapoor, Formerly University of Illinois at Chicago, Mechanicsville, VA 23111, United States

Author contributions: Kapoor S solely contributed to the manuscript.

Correspondence to: Shailendra Kapoor, MD, Formerly University of Illinois at Chicago, 74 crossing, Mechanicsville, VA 23111, United States. shailendrakapoor@yahoo.com

Telephone: +1-804-3454567 Fax: +1-804-7786789

Received: March 29, 2012 Revised: May 18, 2012

Accepted: May 26, 2012

Published online: August 7, 2012

Peer reviewers: Riccardo Nascimbeni, Professor, Department of Medical and Surgical Sciences, University of Brescia, UO Chirurgia Generale 1, 25123 Brescia, Italy; Philip H Gordon, Professor, Department of Surgery, McGill University, 3755 Cote Ste. Catherine Road, Suite G304, Montreal H3T 1E2, Canada

Kapoor S. Opioid/naloxone prolonged release combinations for opioid induced constipation. *World J Gastroenterol* 2012; 18(29): 3921-3922 Available from: URL: <http://www.wjgnet.com/1007-9327/full/v18/i29/3921.htm> DOI: <http://dx.doi.org/10.3748/wjg.v18.i29.3921>

Abstract

I read with great interest the recent article by Chen *et al* in a recent issue of your esteemed journal. The article is highly thought provoking. One emerging therapeutic alternative for opioid induced constipation is the emergence of opioid/naloxone prolonged release combinations. For instance, naloxone when administered in a 1:2 ratio with oxycodone reverses the inhibitory effect of oxycodone on the gastrointestinal tract. The advantage of oxycodone/naloxone prolonged release (OXN) is that while its anti-nociceptive efficacy is equivalent to that of oxycodone prolonged release (OXC), it significantly decreases the "Bowel Function Index" thereby ameliorating symptoms of opioid induced constipation to a large extent. Schutter *et al* in a recent study have reported a decrease in the bowel function index from 38.2 to 15.1. Similarly, Löwenstein *et al* in another recent study have reported that following a month of therapy, complete spontaneous bowel movements per week is increased from one in OXC therapy to three in OXN therapy.

© 2012 Baishideng. All rights reserved.

Key words: Opioid naloxone; Cancer; Morphine; Carcinogenesis

TO THE EDITOR

I read with great interest the article by Chen *et al*^[1] in a recent issue of your esteemed journal. The article is highly thought provoking. One emerging therapeutic alternative for opioid induced constipation is the emergence of opioid/naloxone prolonged release combinations.

For instance, naloxone when administered in a 1:2 ratio with oxycodone reverses the inhibitory effect of oxycodone on the gastrointestinal tract^[2]. The advantage of oxycodone/naloxone prolonged release (OXN) is that while its anti-nociceptive efficacy is equivalent to that of oxycodone prolonged release (OXC), it significantly decreases the "Bowel Function Index" thereby ameliorating symptoms of opioid induced constipation to a large extent. Schutter *et al*^[3] in a recent study have reported a decrease in the bowel function index from 38.2 to 15.1. Similarly, Löwenstein *et al*^[4] in another recent study have reported that following a month of therapy, complete spontaneous bowel movements per week is increased from one in OXC therapy to three in OXN therapy.

In fact, the colonic transit time is reduced by almost two hours with OXN 20/10 mg combination therapy^[5]. This is further affirmed by the fact that in patients receiving OXN therapy the mean laxative use is decreased by almost 20% while the stool consistency as measured by the "Bristol

Stool Form Scale” is improved from type 2 to type 5^[6,7].

In addition, in a recent study, the quality of life was accentuated by 47% following OXN therapy for management of chronic severe neuropathic pain^[8]. Similarly, a low mean Brief Pain Inventory Short Form “sleep interference” score is maintained with OXN therapy and is comparable to OXC therapy^[9].

Clearly, OXN therapy is highly effective in mitigating the symptoms of opioid induced constipation and provides a safe and efficacious alternative to methylnaltrexone.

REFERENCES

- 1 **Chen W**, Chung HH, Cheng JT. Opiate-induced constipation related to activation of small intestine opioid μ 2-receptors. *World J Gastroenterol* 2012; **18**: 1391-1396
- 2 **Smith K**, Hopp M, Mundin G, Leyendecker P, Bailey P, Grothe B, Uhl R, Reimer K. Single- and multiple-dose pharmacokinetic evaluation of oxycodone and naloxone in an opioid agonist/antagonist prolonged-release combination in healthy adult volunteers. *Clin Ther* 2008; **30**: 2051-2068
- 3 **Schutter U**, Grunert S, Meyer C, Schmidt T, Nolte T. Innovative pain therapy with a fixed combination of prolonged-release oxycodone/naloxone: a large observational study under conditions of daily practice. *Curr Med Res Opin* 2010; **26**: 1377-1387
- 4 **Löwenstein O**, Leyendecker P, Hopp M, Schutter U, Rogers PD, Uhl R, Bond S, Kremers W, Nichols T, Krain B, Reimer K. Combined prolonged-release oxycodone and naloxone improves bowel function in patients receiving opioids for moderate-to-severe non-malignant chronic pain: a randomised controlled trial. *Expert Opin Pharmacother* 2009; **10**: 531-543
- 5 **Smith K**, Hopp M, Mundin G, Bond S, Bailey P, Woodward J, Palaniappan K, Church A, Limb M, Connor A. Naloxone as part of a prolonged release oxycodone/naloxone combination reduces oxycodone-induced slowing of gastrointestinal transit in healthy volunteers. *Expert Opin Investig Drugs* 2011; **20**: 427-439
- 6 **Ahmedzai SH**, Nauck F, Bar-Sela G, Bosse B, Leyendecker P, Hopp M. A randomized, double-blind, active-controlled, double-dummy, parallel-group study to determine the safety and efficacy of oxycodone/naloxone prolonged-release tablets in patients with moderate/severe, chronic cancer pain. *Palliat Med* 2012; **26**: 50-60
- 7 **Clemens KE**, Quednau I, Klaschik E. Bowel function during pain therapy with oxycodone/naloxone prolonged-release tablets in patients with advanced cancer. *Int J Clin Pract* 2011; **65**: 472-478
- 8 **Hermanns K**, Junker U, Nolte T. Prolonged-release oxycodone/naloxone in the treatment of neuropathic pain - results from a large observational study. *Expert Opin Pharmacother* 2012; **13**: 299-311
- 9 **Sandner-Kiesling A**, Leyendecker P, Hopp M, Tarau L, Lejcko J, Meissner W, Sevcik P, Hakl M, Hrib R, Uhl R, Dürr H, Reimer K. Long-term efficacy and safety of combined prolonged-release oxycodone and naloxone in the management of non-cancer chronic pain. *Int J Clin Pract* 2010; **64**: 763-774

S- Editor Gou SX L- Editor A E- Editor Li JY