

UC San Diego

UC San Diego Previously Published Works

Title

Corrigendum: Intrathecal drug delivery: Advances and applications in the management of chronic pain patient

Permalink

<https://escholarship.org/uc/item/00q8d1v3>

Journal

Frontiers in Pain Research, 4

ISSN

2673-561X

Authors

De Andres, Jose

Hayek, Salim

Perruchoud, Christophe

et al.

Publication Date

2023

DOI

10.3389/fpain.2023.1190014

Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

Peer reviewed



OPEN ACCESS

EDITED AND REVIEWED BY

Michael D. Staudt,
Oakland University William Beaumont School of
Medicine, United States

*CORRESPONDENCE

Jose De Andres
✉ deandres_jos@gva.es

SPECIALTY SECTION

This article was submitted to Neuromodulatory
Interventions, a section of the journal Frontiers
in Pain Research

RECEIVED 20 March 2023

ACCEPTED 23 March 2023

PUBLISHED 11 April 2023

CITATION

De Andres J, Hayek S, Perruchoud C,
Lawrence MM, Reina MA, De Andres-Serrano C,
Rubio-Haro R, Hunt M and Yaksh TL (2023)
Corrigendum: Intrathecal drug delivery:
Advances and applications in the management
of chronic pain patient.
Front. Pain Res. 4:1190014.
doi: 10.3389/fpain.2023.1190014

COPYRIGHT

© 2023 De Andres, Hayek, Perruchoud,
Lawrence, Reina, De Andres-Serrano, Rubio-
Haro, Hunt and Yaksh. This is an open-access
article distributed under the terms of the
Creative Commons Attribution License (CC BY).
The use, distribution or reproduction in other
forums is permitted, provided the original
author(s) and the copyright owner(s) are
credited and that the original publication in this
journal is cited, in accordance with accepted
academic practice. No use, distribution or
reproduction is permitted which does not
comply with these terms.

Corrigendum: Intrathecal drug delivery: Advances and applications in the management of chronic pain patient

Jose De Andres^{1,2*}, Salim Hayek³, Christophe Perruchoud^{4,5},
Melinda M. Lawrence³, Miguel Angel Reina^{6,7,8,9}, Carmen De
Andres-Serrano¹⁰, Ruben Rubio-Haro^{11,12}, Mathew Hunt¹³ and
Tony L. Yaksh¹⁴

¹Surgical Specialties Department, Valencia University Medical School, Valencia, Spain, ²Anesthesia Critical Care and Pain Management Department, Valencia, Spain, ³Department of Anesthesiology, University Hospitals Cleveland Medical Center, Cleveland, OH, United States, ⁴Pain Center and Department of Anesthesia, La Tour Hospital, Geneva, Switzerland, ⁵Lausanne University Hospital and University of Lausanne, Lausanne, Switzerland, ⁶Department of Anesthesiology, Montepincipe University Hospital, Madrid, Spain, ⁷CEU-San-Pablo University School of Medicine, Madrid, Spain, ⁸Department of Anesthesiology, University of Florida College of Medicine, Gainesville, FL, United States, ⁹Facultad de Ciencias de la Salud Universidad Francisco de Vitoria, Madrid, Spain, ¹⁰Multidisciplinary Pain Clinic, Vithas Virgen del Consuelo Hospital, Valencia, Spain, ¹¹Anesthesia and Pain Management Department, Provincial Hospital, Castellon, Spain, ¹²Multidisciplinary Pain Clinic, Vithas Virgen del Consuelo Hospital, Valencia, Spain, ¹³Department of Physiology, Karolinska Institute, Stockholm, Sweden, ¹⁴Departments of Anesthesiology and Pharmacology, University of California, San Diego, San Diego, CA, United States

KEYWORDS

antisense, intrathecal, neuromodulation, chronic pain, implantable drug delivery system (IDDS)

A Corrigendum on

Intrathecal drug delivery: Advances and applications in the management of chronic pain patient

By De Andres J, Hayek S, Perruchoud Ch, Lawrence MM, Reina MA, De Andres-Serrano C, Rubio-Haro R, Hunt M and Yaksh TL. (2022) Front. Pain Res. 3:900566. doi: 10.3389/fpain.2022.900566

In the published article, there was an error in the figure and legend of Figure 9. In the incorrect figure, the two columns of recording are switched. The $T = 15$ s image should be $T = 240$ s and the $T = 240$ image should be $T = 15$ s. The corrected figure is the same except the images switched to correct for the mislabeled timing. The figure legend is now as follows.

“FIGURE 9 Two-dimensional diffusion chamber with a catheter having 20 microports. Images taken at 15 s (top, left) and 240 s (bottom, left), following bolus delivery of 2.6 μ l as a bolus at time 0. The image on the right of the $T = 15$ s image shows an enlargement of the high velocity stream exiting the catheter at two of the exit valves, with the characteristic mushroom head where dye laden solute encounters the local dye-free fluid phase. Note the even distribution of dye from proximal (pump) to distal over the 6-cm catheter distance (T. L. Yaksh)”

The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

