



PRESS RELEASE

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KIDNEY FUNCTION MAY AFFECT RISKS ASSOCIATED WITH PRESCRIPTION OPIOIDS

Study assessed safety of prescription opioids across different levels of kidney function.

Highlights

- Compared with other pain medications, prescription opioids were linked with higher risks of death and hospitalization, particularly with higher doses.
- The risk of death associated with opioids was highest among people with lower kidney function.

Washington, DC (October 3, 2019) — Receiving prescriptions of opioids was linked with higher risks of death and hospitalization compared with receiving other pain medications, and the risk of death was especially high in individuals with lower kidney function. The findings appear in an upcoming issue of *CJASN*.

When individuals with chronic kidney disease (CKD) are in need of pain medications, opioids are often prescribed due to concerns of kidney toxicity from other medications such as non-steroidal anti-inflammatory drugs (NSAIDs). Because opioids are excreted by the kidney, however, people with CKD may experience higher exposure to the active compounds of opioids because of less clearance from the body. To date, few studies have quantified the safety of prescription opioids across different levels of kidney function.

To investigate, a team led by Tessa Novick, MD, MSW, MHS and Morgan Grams, MD, PhD (Johns Hopkins University) examined information on deaths and hospitalizations among adult primary care patients in the Geisinger Healthy System of Pennsylvania between 2008 and 2017. People receiving their first opioid prescription were matched to people receiving NSAIDs.

The analysis included 23,123 patients who received opioids and the same number who received NSAIDs. There were 2,457 deaths and 9,147 first hospitalizations, corresponding to 12 deaths and 54 hospitalizations per 1,000 person-years. (A person-year is the number of years of follow-up multiplied by the number of people in the analysis.)

“We found that receipt of prescription opioids was associated with a higher risk of death and hospitalization compared with other pain medications, particularly with higher doses. The risk of death was highest among people with lower kidney function,” said Dr. Novick.

For example, in individuals with normal kidney function, those who received high doses of opioids (daily oral morphine milligram equivalents of at least 60) were more than twice as likely to die as those who received NSAIDs. Among individuals with moderate-to-severe CKD, those who received high doses of opioids had a nearly 4-times higher risk of dying. For hospitalizations, the risk was 68% higher for individuals with normal kidney function who received high opioid doses compared with NSAIDs. The risk of hospitalization associated with opiate prescription did not differ by level of kidney function.

Study co-authors include Aditya Surapaneni, PhD; Jung-Im Shin, MD, PhD; Caleb Alexander, MD, MS; Lesley A. Inker, MD, MS; and Alex R. Chang, MD, MS.

Disclosures: Dr. Alexander is Chair of FDA’s Peripheral and Central Nervous System Advisory Committee; has served as a paid advisor to IQVIA; is a co-founding Principal and equity holder in Monument Analytics, a health care consultancy whose clients include the life sciences industry as well as plaintiffs in opioid litigation; and is a member of OptumRx’s National P&T Committee. This arrangement has been reviewed and approved by Johns Hopkins University in accordance with its conflict of interest policies. ACKNOWLEDGEMENTS: Research reported in this publication was supported by R01 DK115534 (PI: Dr. Grams and Inker) and R01 DK100446 (PI: Dr. Grams and Coresh) from the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) of the National Institutes of Health (NIH). Dr. Novick was supported by a training grant from the NIDDK (T32 DK007732 24).

The article, entitled “Associations of opioid prescriptions with death and hospitalization across the spectrum of estimated GFR,” will appear online at <http://cjasn.asnjournals.org/> on October 3, 2019, doi: 10.2215/CJN.00440119.

Since 1966, ASN has been leading the fight to prevent, treat, and cure kidney diseases throughout the world by educating health professionals and scientists, advancing research and innovation, communicating new knowledge, and advocating for the highest quality care for patients. ASN has more than 20,000 members representing 131 countries. For more information, please visit www.asn-online.org or contact the society at 202-640-4660.

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Twitter: Kidney function may affect risks associated with prescription opioids.

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Facebook: Receiving prescriptions of opioids was linked with higher risks of death and hospitalization compared with receiving other pain medications, and the risk of death was especially high in individuals with lower kidney function. The findings appear in *CJASN*.