DSEN ABSTRACT

Controlled-release hydromorphone and risk of infection in adults: A Systematic Review

Summary

- The systematic review aimed to examine the risk of infection in PWID exposed to controlled release hydromorphone. Through a thorough search of Embase, Medline and EMB Reviews, we found 5 studies reporting on the relationship between hydromorphone controlled-release and HCV, IE, and/or HIV.

Key messages

- We found that due to the low number and low quality of studies included in the review, the need remains for further research on the relationship between hydromorphone controlled-release exposure and resulting infections. These results answered the query commissioned by Health Canada.

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What is the issue?

- It has been suggested that the increasing availability of controlled-release formulation of hydromorphone (HCR) might be associated with contributing to higher rates of hepatitis c virus (HCV), infective endocarditis (IE), and human immunodeficiency virus (HIV) due to contamination and reuse of Injection Drug Preparation Equipment (IDPE), however this association has not been confirmed.

What was the aim of the study?

- The objective of this systematic review was to examine the risk of IE, HCV and/or HIV in people who inject drugs (PWID) exposed to controlled release hydromorphone compared with other opioids, as well as to determine the characteristics of individuals exposed to controlled-release hydromorphone experiencing these infections.

How was the study conducted?

- MEDLINE, EMBASE, EBM Reviews, and grey literature was searched for relevant studies.
- References of relevant systematic reviews and included studies were also scanned.
- Title/abstract screening, full-text screening, and data abstraction were carried out by two reviewers independently, with discrepancies solved by a third reviewer.
- Risk of bias appraisal was completed at the outcome level, carried out by two reviewers, and used the Newcastle-Ottawa Scale (NOS) and the Effective Practice and Organization of Care (EPOC) risk of bias tool. Discrepancies were resolved by a third reviewer.

What did the study find?

- 5 studies fulfilled the eligibility criteria and were included, which indicates a lack of evidence in this area.
    - All studies were found to be of very low quality and to have a high risk of bias.
    - Three studies were based on retrospective data.
    - The associations were heterogeneous. One retrospective cohort study found an association between HCR and IE, whereas a case-control study found no evidence of an association. One retrospective cohort study found an association between the number of HCR prescriptions and prevalence of HCV.
    - Two studies focused on hydromorphone overall and not the controlled-release formulation, which makes interpretation difficult.

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Logos if appropriate (can be sent separately by email, if needed)

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