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Pain management interventions for women of reproductive age with chronic primary pain: a systematic review

Summary

We conducted a systematic search of published systematic reviews, meta-analyses, and pooled studies was to identify evidence directly pertaining to pharmacological and/or non-pharmacological pain management (monotherapy or combination therapy) versus usual care or clinical interviews or drug toxicology screening tests versus another method of eliciting information on drug-seeking or dependence behavior among women of reproductive age. While we could not identify any evidence syntheses that met our inclusion criteria, hand searching their included studies identified 51 relevant studies. The most frequently used pain management interventions were exercise, coping with pain, and physiotherapy. Most trials showed small benefits reflected in reduced pain assessments and increased functionality. No studies were conducted in pregnant women. In terms of eliciting drug use information, natural language processing was shown to have a high sensitivity, specificity, positive predictive value, and negative predictive value.

Implications

There is a dearth of studies on pain management interventions in pregnant women. Nevertheless, existing evidence indicates promising results for non-pharmacological interventions in women of reproductive age (but not pregnant at the time of the trial). Such interventions are expected to be safer for the pregnant mother and growing fetus than conventional analgesic or other pharmacological (e.g. antidepressants) regimens.

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What is the current situation?

- Chronic primary pain is highly prevalent in the general population and poses a tremendous burden on the healthcare system. No evidence-based guidelines are currently available for the management of chronic primary pain in women of reproductive age.

What is the objective?

- This systematic review identified and evaluated current evidence on the efficacy and safety of both pharmacologic and non-pharmacologic interventions for managing pain in women of reproductive age diagnosed with chronic primary pain.

How was the review conducted?

- Three databases (Medline, Embase, and Cochrane Library) were searched to identify systematic reviews and meta-analyses (or pooled studies) that evaluated pharmacological and/or non-pharmacological pain management (monotherapy or combination therapy) versus usual care or clinical interviews or drug toxicology screening tests versus another method of eliciting information on drug-seeking or dependence behavior among women of reproductive age between the ages of 15 and 49 years. Primary studies included in these reviews were screened in accordance with the following criteria: randomized controlled trials [RCTs] on pain management and RCTs, cohort studies and cross-sectional studies for drug testing/ eliciting information on drug use.

- Titles and abstracts of citations and relevant full-texts from the bibliographic databases were screened by one reviewer, with clarifications provided by the team members on inclusion, as required. One reviewer conducted data extraction and risk of bias assessment (Cochrane risk of bias tool for RCTs)/ quality assessment for observational study designs); accuracy and completeness were checked by a second reviewer.

What did the review find?

- We identified 101 relevant evidence syntheses but none provided specific answers to the key questions. A hand search of the included studies in these syntheses led to the inclusion of 51 studies that met our inclusion criteria.

- The most commonly used interventions for pain management were based on exercise, coping with pain (e.g. cognitive behavioral therapy, stress reduction techniques), and physiotherapy. Most trials showed small benefits that were reflected by reduced pain and increased functionality. No studies were conducted among pregnant women. For drug testing/ elicitation of information on drug use, the four included trials used the natural language processing (NLP) technique, a Prescription Drug Use Questionnaire - Patient Version (PDUQp), the Pain Clinical Assessment System and 1) completion of monthly electronic diaries; 2) monthly urine screens for 6 months; 3) monthly completion of the Opioid Compliance Checklist; 4) monthly group education sessions with worksheet handouts on topics related to substance misuse; and 5) participation in individual motivational compliance counseling. In contrast with PDUQp, NLP had a high sensitivity, specificity, and positive and negative predictive values.