INPLASY PROTOCOL

To cite: Qiu et al. Effect of butorphanol on morphine-related pruritus: a meta-analysis of randomized controlled trials. Inplasy protocol 202240004. doi: 10.37766/inplasy2022.4.0004

Received: 01 April 2022

Published: 01 April 2022

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Support: **None.**

Review Stage at time of this submission: **Preliminary searches.**

Conflicts of interest:
None declared.

Effect of butorphanol on morphine-related pruritus: a meta-analysis of randomized controlled trials

Qiu, YL[1]; Zu, J[2]; Luo, Y[3].

Review question / Objective: **To assess the effect of butorphanol on morphine-related pruritus.**
Condition being studied: **Pruritus, caused by multiple causes, is an intense itching sensation that produces the urge to rub or scratch the skin to obtain relief.**
Information sources: **PubMed, Embase, Cochrane Library, and China National Knowledge Infrastructure Databases, Wan Fang Data, China Science and Technology Journal Database.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 01 April 2022 and was last updated on 01 April 2022 (registration number INPLASY202240004).

INTRODUCTION

Review question / Objective: **To assess the effect of butorphanol on morphine-related pruritus.**

Condition being studied: **Pruritus, caused by multiple causes, is an intense itching sensation that produces the urge to rub or scratch the skin to obtain relief.**

METHODS

Participant or population: **all participants who received morphine for analgesia.**

Intervention: **Butorphanol versus placebo or no intervention.**

Comparator: **Patients using only morphine for analgesia.**

Study designs to be included: Randomized controlled trials (RCTs).

Eligibility criteria: 1) RCTs, 2) prospective studies, 3) language in Chinese and English, 4) human trials, 5) all participants receiving morphine for analgesia.

Information sources: PubMed, Embase, Cochrane Library, and China National Knowledge Infrastructure Databases, Wan Fang Data, China Science and Technology Journal Database.

Main outcome(s): The incidence and the Relative risk (RR) with 95% confidence interval (CI) of morphine-related pruritus in the two groups.

Additional outcome(s): The incidence and the Relative risk (RR) with 95% confidence interval (CI) of other side effects in the two groups.

Quality assessment / Risk of bias analysis: Two authors will independently assesse the quality of the included studies according to the Cochrane collaboration's tool for assessing the risk of bias. The following items will be evaluated for each study: 1) Allocation sequence generation, 2) Allocation concealment, 3) Blinding of participants and personnel, 4) Blinding of outcome assessors, 5) Incomplete outcome data, 6) Selective outcome reporting, 7) Other bias. We will judge all studies into low risk, high risk, unknown risk three groups referring to the judgment standard.

Strategy of data synthesis: We will use Rev Man 5.4 software to conduct all statistical analyses. Relative risk (RR) with 95% confidence interval (CI) was computed for dichotomous outcomes.

Subgroup analysis: We will conduct the subgroup analysis about the effect of administration method of butorphanol on the incidence of pruritus.

Sensitivity analysis: Heterogeneity of the included studies wIll be assessed with the I2 statistic and I2>50% is regarded as significant. If insignificant heterogeneity is high, a fixed-effect model will be used to conduct the meta-analysis found. And a random effect model will be adopted to perform the meta-analysis if I2 >50%.

Language: We only research studies in Chinese and English.

Country(ies) involved: China.

Keywords: butorphanol, morphine, pruritus.

Contributions of each author:

Author 1 - Yan-Li Qiu - The author extract and analyze data and draft the manuscript.
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