PHILIPPINE CHILDREN'S MEDICAL CENTER
Section of Perinatal Anesthesia

A Meta-analysis on the Effectiveness of Postoperative Analgesia with Intrathecal Nalbuphine versus Intrathecal Fentanyl as Neuraxial Adjuvants in Cesarean Section

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INTRODUCTION

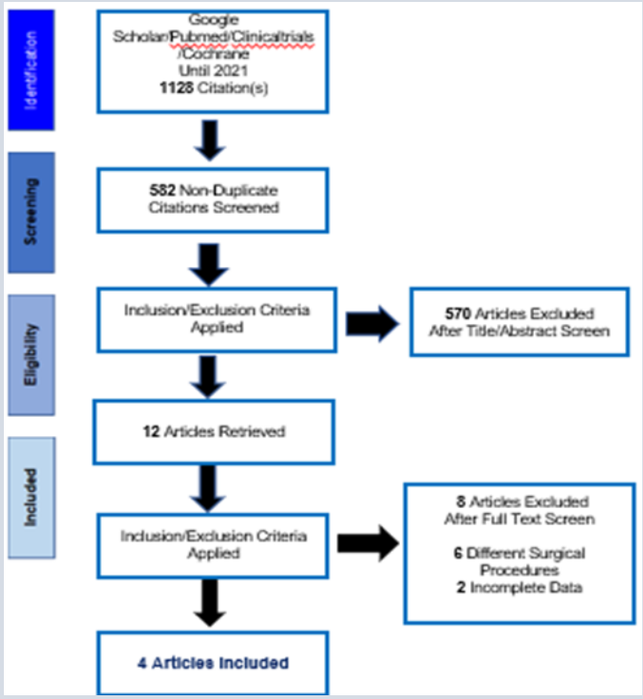
Inadequately treated postoperative pain can contribute significantly to morbidity in women undergoing cesarean section. Recent studies showed that nalbuphine and fentanyl has promising result as neuraxial adjuvants in terms of postoperative analgesia and with lower incidents of adverse effect when use in cesarean section.

OBJECTIVES

To determine the effectiveness of postoperative analgesia with intrathecal nalbuphine versus intrathecal fentanyl as neuraxial adjuvants in cesarean section.

KEYWORDS: ***cesarean section, nalbuphine, fentanyl, meta-analysis***

METHODOLOGY



PRISMA guidelines was performed. Cochrane version 2 risk-of-bias-tool for RCT's was used to assess for quality. Quantitative data were pooled and analyzed using Review Manager 5.4.

RESULTS

Pooled mean difference from the four included studies showed that intrathecal nalbuphine significantly prolonged the duration of postoperative analgesia compared to fentanyl (MD=21.12, 95%CI=11.13,31.11,I^2=73%).

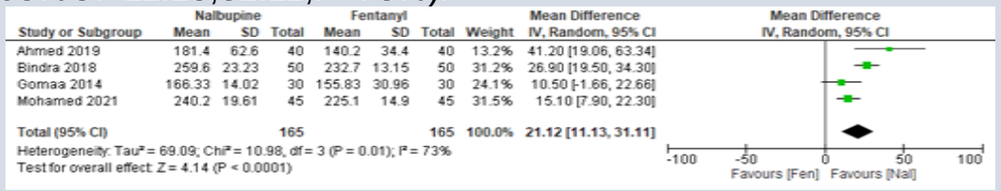


Figure 4. Meta-analysis on the effect on duration of postoperative analgesia

Pooled risk ratio showed lesser risk for pruritus (RR=0.07, 95%CI=0.01, 0.36, I^2 = 0%) and postoperative nausea and vomiting (RR=0.38, 95%CI= 0.19,0.78, I^2 = 11%) who received intrathecal nalbuphine compared to intrathecal fentanyl.

CONCLUSION AND RECOMMENDATIONS

Intrathecal nalbuphine appears to have a better outcome in increasing the duration of postoperative analgesia and with lesser incidence of PONV and pruritus than fentanyl. The presence of heterogeneity warrants that the results should be treated with caution especially with the possibility of publication bias.

Inclusion of high-quality studies from relevant databases to minimize publication bias and strict adherence on the uniformity of the dosage and methods to achieve the target clinical outcomes.