

# Patient-controlled analgesia not as effective as epidural for labor pain

February 3 2014

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In a study to be presented on Feb. 7 at the Society for Maternal-Fetal Medicine's annual meeting, The Pregnancy Meeting, in New Orleans, researchers will report findings which suggest remifentanil patient controlled analgesia is not equivalent to epidural analgesia for pain, pain appreciation scores, and overall satisfaction in women who request for pain relief during labor.

Remifentanil patient controlled analgesia (RPCA) is a short-acting pain reliever, an opiate, similar to pethidine. It relieves pain rapidly, but also wears off very quickly, which makes it very suitable for administration through patient controlled analgesia. With RPCA the patient can give herself a dose of remifentanil intravenously every few minutes. Recent studies suggested that RPCA was equal to epidural analgesia (EA) in regards to satisfaction with [pain relief](#), so this study, titled Remifentanil patient controlled analgesia versus epidural analgesia in labor; a randomized controlled equivalence trial set out to compare the effectiveness.

Pain appreciation was measured hourly on a visual analogue scale, and expressed as area under the curve (AUC). The AUC gives a time-weighted measure of total pain appreciation. It was calculated for the duration of labor and for the time that pain relief was administered. A higher AUC for pain appreciation represents higher satisfaction with pain relief.

For the study, 709 [women](#) were allocated to RPCA and 705 to EA. They

were randomly chosen from healthy pregnant women who intended to deliver vaginally at 15 different hospitals in the Netherlands. Four hundred forty-seven women in the RPCA and 343 in the EA group received pain relief during labor. Among women allocated to RPCA, 344 received nothing but RPCA; in the EA group 295 received just EA. Thirteen percent of the women switched to EA after RPCA. The AUC for total pain appreciation during labor was 26.5 in the RPCA group versus 36.0 in the EA group.

"Recent studies suggest that remifentanyl patient controlled analgesia (RPCA) is equivalent to epidural analgesia (EA) with respect to pain appreciation (satisfaction with pain relief). The aim of our study was to compare the effectiveness of RPCA with EA regarding pain appreciation," said Liv Freeman, M.D., one of the study's authors.

"The results of the study show that RPCA is not equivalent to EA with respect to pain appreciation, i.e. satisfaction with pain relief. Pain appreciation scores in women, who requested pain relief during [labor](#), randomized to EA, are significantly better."

Provided by Society for Maternal-Fetal Medicine

Citation: Patient-controlled analgesia not as effective as epidural for labor pain (2014, February 3) retrieved 10 May 2023 from <https://medicalxpress.com/news/2014-02-patient-controlled-analgesia-effective-epidural-labor.html>

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