



We compared target controlled infusion of remifentanyl and local lidocaine infiltration to placebo and local lidocaine infiltration to decrease pain scores during central venous catheter placement” Vardon Bounes et al (2019).

Abstract:

OBJECTIVE: Central venous catheter insertion is a common practice for anesthetists, but this invasive procedure generates anxiety and pain in patients that are often underestimated. We compared target controlled infusion of remifentanyl and local lidocaine infiltration to placebo and local lidocaine infiltration to decrease pain scores during central venous catheter placement.

METHODS: We included conscious, adult patients without contraindication to remifentanyl or lidocaine. We excluded pregnant women, emergency situations and opioid abuse. Patients requiring central venous catheter were randomly assigned, using computer-generated allocation numbers stored in sealed envelopes, to receive target controlled infusion of remifentanyl or placebo - all patients received local anesthesia with lidocaine. All patients were hospitalized in recovery room or intensive care unit, monitored and received 4 L/min of oxygen. Primary outcome was global pain (verbal numeric rating pain scale) during the procedure. Secondary outcomes were pain perceived at every stage of the procedure, anxiety, patient satisfaction, operational ease and side effects. Data obtained for all patients included in the cohort were analyzed.

RESULTS: In this double blind study, we included 90 patients (split into two groups of 45 patients). Global pain was significantly reduced in the remifentanil group: 20/100 (95% confidence interval [CI] 16-40) vs. 50/100 (95% CI 40-60) in the placebo group; $P=0.0009$. No major adverse events were observed during this study, and there were no significant differences between both groups regarding side effects.

DISCUSSION: Target-controlled infusion of remifentanil is an effective drug to reduce pain during central venous catheter insertion in association with lidocaine-based local anesthesia, in conscious patients.

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Reference:

Vardon Bounes, F., Pichon, X., Ducos, G., Ruiz, J., Samier, C., Silva, S., Sommet, A., Fourcade, O., Conil, J.M. and Minville, V. (2019) Remifentanil for Procedural Sedation and Analgesia in Central Venous Catheter Insertion: A Randomized, Controlled Trial. *The Clinical Journal of Pain*. May 13th.. doi: 10.1097/AJP.0000000000000725.

