This meta-analysis suggests that vapocoolant spray significantly decreased pain during intravenous cannulation when compared with placebo spray or no treatment in both adults and children” Zhu et al (2018).

Abstract:

Background: Intravenous cannulation is a routine procedure in hospitalized patients, and pain can occur during the cannulation process. Vapocoolant spray is an advantageous analgesic alternative for intravenous cannula insertion.

Objectives: The objective of our meta-analysis is to compare the effectiveness of vapocoolant spray and placebo spray/no treatment for pain reduction during intravenous cannulation.

Design: A meta-analysis to identify evidence from randomized controlled trials.

Methods: We searched Web of Science, PubMed, Cochrane Central Register of Controlled Trials, China National Knowledge Infrastructure, and Wanfang Data for publications before January 2018. The outcomes measured included pain during intravenous cannulation, patients’ anxiety due to the spray, first attempt success rate, technical ease of the attempt, adverse events, and participant satisfaction.

Results: We included 11 studies with 1410 patients. The meta-analysis results showed that
Vapocoolant spray versus placebo spray for reducing IV cannulation pain

Vapocoolant spray significantly decreased pain during intravenous cannulation compared with placebo spray or no treatment in both adults and children. In addition, vapocoolant spray significantly increased the technical ease of the attempt and participants’ satisfaction. However, patients’ anxiety due to spray, first attempt success rate, and adverse events were not associated with vapocoolant spray.

Conclusions: This meta-analysis suggests that vapocoolant spray significantly decreased pain during intravenous cannulation when compared with placebo spray or no treatment in both adults and children. We recommend the use of vapocoolant spray during intravenous cannulation to decrease pain. Future research may help to unify pain measurement standards. Patients’ anxiety due to spray and technical ease of the attempt should be explored in future research.

Reference:


Thank you to our partners for supporting IVTEAM