09AP05-7 Non-pharmacologic methods for post-operative pain relief - an alternative to drugs or just a figment of imagination?

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Background and Goal of Study

Non-pharmacological treatments (NPTs) like, e.g., cold packs, acupuncture, meditation, or distractions, are widely used to ease post-surgical pain. We show how frequently they are used across Europe and if there is an association between its use and patient-reported outcomes of pain relief and reduced wish for more pain treatment.

Materials and methods

We use data from the world's largest acute pain registry PAIN OUT where patients report their pain levels and side effects after surgery. 15 different NPTs are tested for their effectiveness using Mann-Whitney-U-test, Kruskal-Wallis-test, General Linear Model, and Logistic Regression. We adjust for age and gender and further specifically look at the three most frequent surgeries in PAIN OUT: total knee replacement, total hip replacement, and laparoscopic cholecystectomy.

Results and discussion:

14,767 patients from 12 European countries were analyzed. The 8,204 (55.6%) patients who did not use NPTs had slightly but significantly more pain relief than the 6,563 (44.4%) patients who did use them (means of $71.2\% \pm 27.9\%$ vs. $68.6\% \pm 25.7\%$, $p=.000$). Using NPTs does not affect the wish for more pain treatment. No single NPT stood out from these results. Only for total knee arthroplasty, a positive effect of NPTs on pain relief could be found.

Conclusion(s): Some NPTs are widely used while some are not. Their effectiveness concerning pain, based on this observational data, could not be shown. The literature on the topic is contradictory and our findings add to this. Benefit and costs of NPTs should thus be considered carefully.

Fig. 1: Box-plots of pain relief show no difference between patients who use non-pharmacological methods and those who don't.

Fig. 2: The difference in the wish for more pain treatment between patients who use non-pharmacological treatments and those who don't is clinically irrelevant.