



Response

Response to the Article “Comparison of the Cost-Utility Analysis of Electroacupuncture and Nonsteroidal Antiinflammatory Drugs in the Treatment of Chronic Low Back Pain”



Dear Editor in Chief,

We compared the cost-utility of electroacupuncture and NSAIDs in the treatment of chronic low back pain, and the results were published in *JAMS* on April 2018. Recently, we received a response to that article, making some questions and raising some great points. With many thanks to the commenting author(s) for the time and consideration, our response is as follows.

- It is important to explain why NSAIDs were chosen as the comparator and what types and dosing schedules of NSAIDs were studied.
 - According to the international guidelines, NSAIDs are used to treat chronic low back pain, and patients often use these drugs to relieve the pain [1], so these drugs are an appropriate choice to be the standard comparator.
 - Types and dosing of NSAIDs, which was studied, are listed in Table 1 [2]. In this study, the average consumption of these drugs (alone or combined with other NSAIDs) was multiplied with the drug price to obtain the cost of these medications.
- The costs presented in the study are not transparent. It is challenging to analyze the specific costs, especially the direct nonmedical costs, because they are not specified.
 - In the materials and methods section of the article, a variety of costs and the way they were measured are clearly explained. The direct nonmedical costs include travel, meals, and hoteling costs when patients are receiving medical services. However, in this study, we considered only the travel costs because all participants were residents of Tehran.
- The study failed to present the results in the appropriate format; cost-utility analyses require results in terms of quality-adjusted life years and incremental cost-utility ratios (ICER). However, only utilities and average cost-effectiveness ratios (ACER) were reported in the study. The ACER is the ratio of the cost to benefit of an intervention without any comparisons to alternatives, and ICER is always used when comparing different treatment options
 - Owing to the 1-year study period, cost-utility analysis does not require quality-adjusted life year calculation [3]. According to our results, the cost of the electroacupuncture method was less than NSAID therapy method and the electroacupuncture method was more effective, so the electroacupuncture method is the dominant option, and the NSAID therapy method is a dominated option, and in this situation, it is not necessary to calculate the ICER [4]. The ACER is also reported as an additional calculation in this study.
- The study did not conduct any sensitivity analysis, thus not allowing for any uncertainty in the estimates of costs and consequences, which were already vague and difficult to decipher.
 - Regarding the sensitivity analysis, when applying the one-way sensitivity analysis, (the variation range was 20% for costs and effectiveness), the results did not

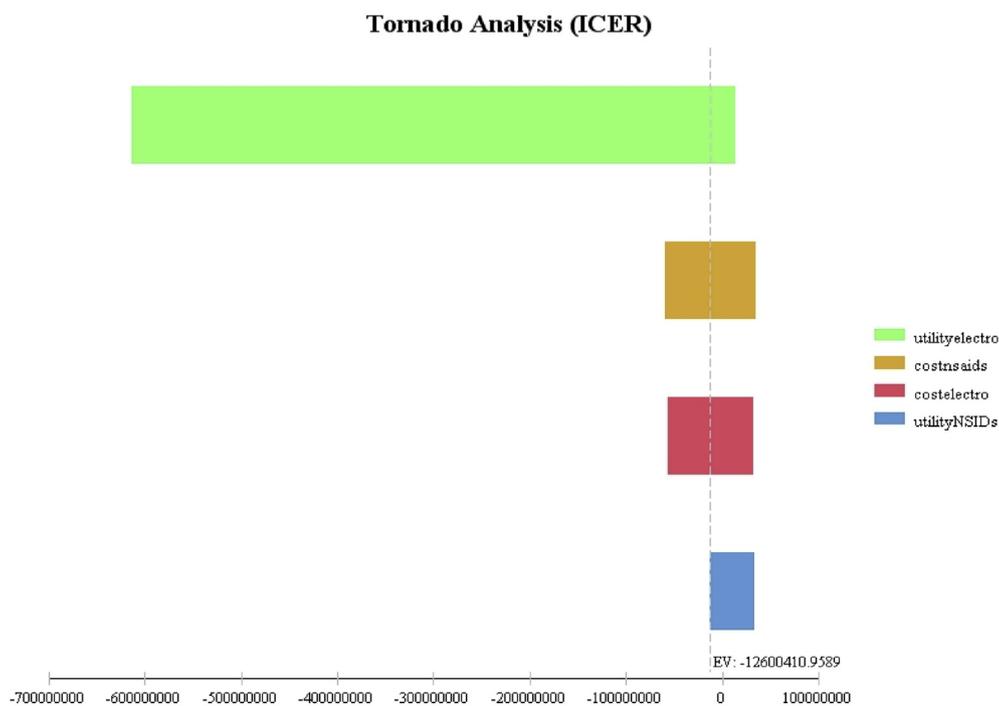
DOI of original article: <https://doi.org/10.1016/j.jams.2018.11.004>.

<https://doi.org/10.1016/j.jams.2019.02.001>

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Table 1 Types and dosing of NSAIDs for chronic low back pain.

Dosage form	Consumption
Ampoule ketorolac 30 mg	Once a day
Tablet meloxicam 7.5 mg	Twice a day
Tablet meloxicam 15 mg	Once a day
Capsule piroxicam 10 mg	Three times a day
Ampoule piroxicam 20 mg	Once a day
Tablet diclofenac 25 mg	Three times a day
Tablet diclofenac 50 mg	Twice a day
Tablet diclofenac 100 mg	Once a day
Ampoule diclofenac 75 mg	Once a day
Suppository diclofenac 50 mg	Twice a day
Suppository diclofenac 100 mg	Once a day
Capsule indomethacin 25 mg	Three times a day
Capsule indomethacin 75 mg	Once a day
Suppository indomethacin 50 mg	Twice a day
Suppository indomethacin 100 mg	Once a day
Tablet naproxen 250 mg	Three times a day
Tablet naproxen 500 mg	Twice a day
Tablet ibuprofen 400 mg	Three times a day
Capsule mefenamic acid 250 mg	Three times a day

**Figure 1** One-sided sensitivity analysis. ICER = incremental cost-utility ratios.

change, so the sensitivity analysis results were not presented in the article. However, the results of the one-sided sensitivity analysis are reported here (Fig. 1).

We appreciate the commenting authors and hope that the aforementioned explanations are satisfying.
Best regards.

On behalf of co-authors.
M. Hossein Ayati, MD, PhD.

References

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