In Response

To the Editor:

Authors have some reservations about this article. However, they lift up an important question whether opioid related treatment failure and central sensitization are related to doze, type of opioid, or total days of opioid use.

Our study was a clinical quality registry study on patients who received interventional pain treatment at the unit for physical medicine and rehabilitation. This multimodal treatment protocol include pain reprocessing toward increased physical activity and return to activities after facet-nerve blocks. This working model includes explanation (diagnostic facet block), positive expectations with physical activity ("motion is lotion, use it or lose it") and follow-up. Thus, these positive long-term effects after blocks at 1-month follow up may also be related to changes in brain state (Limbic-emotional-relearning) as proposed by Vlayen et al (6). Treatment failure for opioid users could be related to central sensitization but also for inhibited changes in activity and relearning. The formula for lumbar medial branch block were the same as there was only 2 physicians who used same standard procedure following Naths protocol.

Most of our patients using opioids use weak opioids such as codeine, tramadol, or transdermal pubrenorfin and only a few patients in this study did use an oxycodone derivate with higher doses. To our knowledge, earlier studies on opioid induced hyperalgesia or sensitization did not indicate that the mechanisms are related primarily to morphine equivalent (opioid-induced hyperalgesia (OIH) is most broadly defined as a state of nociceptive sensitization caused by exposure to opioids). There is growing evidence that already after 7 days, opioid use could be harmful. Two fair-quality retrospective cohort studies found opioid therapy prescribed for acute pain associated with greater likelihood of long-term use. One study evaluated opioid-naïve patients who had undergone low-risk surgery, such as cataract surgery and varicose vein stripping. Use of opioids within 7 days of surgery was associated with increased risk for use at one year. The other study found that among patients with a workers' compensation claim for acute low back pain, compared to patients who did not receive opioids early after injury (defined as use within 15 days following onset of pain), patients who did receive early opioids had an increased likelihood of receiving 5 or more opioid prescriptions 30-730 days following onset that increased with greater early exposure. Earlier research that have established 90 days as the norm for long-term opioid treatment. We used 90 days as the norm for long-term opioid treatment as we did not find evidence that sensitization or treatment failure could be related to duration of opioid use, contrasting evidence for development of analgesic tolerance. Opioids before surgery has shown to be an independent risk factor for pain outcome in several studies.

We wanted to focus on pain experience and on the other hand quality of life as outcome factors. We could have shown results of psychological effects on EQ5D subscale for mental health, which shows lower ratings for opioid users, but our focus was functional outcome as a whole. As 50% of our patients are elderly, aged > 64 years with other diagnoses, there are many confounding factors for the outcome in longer perspective regarding fall and emergency department visits.

We did not find significant differences in outcome for NSAID/paracetamol users or gabapentinoid users. However, patients using both opioid and gabapentinoid showed no significant pain relief at follow-up and no improvements for 5 subscales for impairments in EQ5D questionnaire (Fig. 1).

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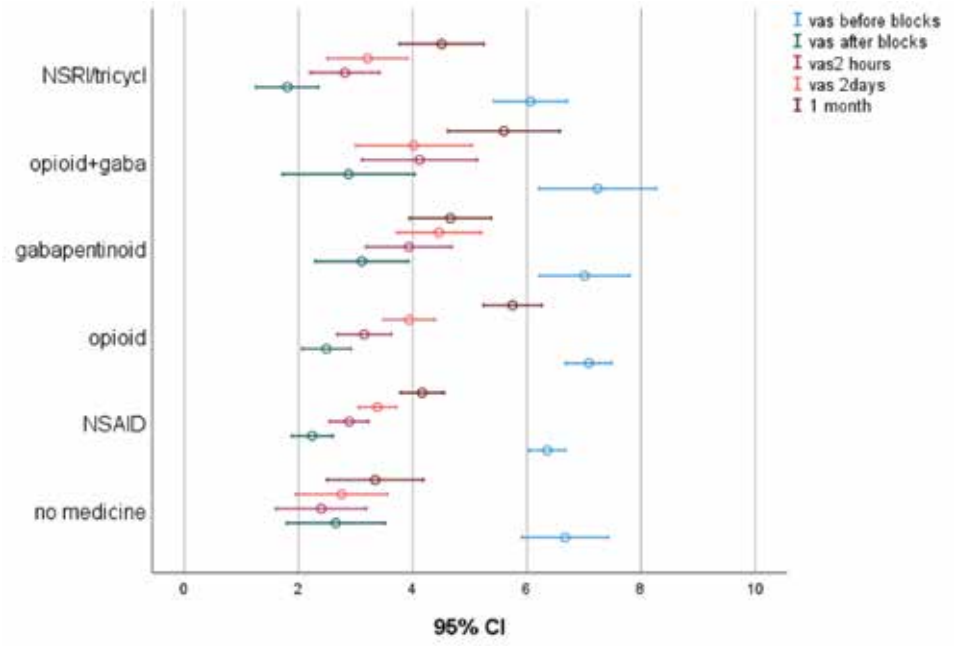

Fig. 1.

References

1. Alam A, Gomes T, Zheng H, Mamdani M, Juurlink D, Bell C. Long-term analgesic use after low-risk surgery: A retrospective cohort study. *Arch Intern Med* 2012;172:425-430.
2. Yerneni K, Nichols N, Abecassis Z, Karras C, Tan L. Preoperative opioid use and clinical outcomes in spine surgery: A systematic review. *Neurosurgery* 2020 1; 86:E490-E507.
3. Lee M, Silverman S, Hansen H, Patel V, Manchikanti L. A comprehensive review of opioid-induced hyperalgesia. *Pain Physician* 2011; 14:145-161
4. Polanco-García M, Granero R, Gallart L, García-Lopez J, Montes A. Finding the vulnerable postoperative population: A two-step cluster analysis of the PAIN-OUT registry. *Euro J Pain* 2022; 26:1732-1745.
5. Silverman SM. Opioid induced hyperalgesia: Clinical implications for the pain practitioner. *Pain Physician* 2009; 12:679-684.
6. Vlaeyen JWS, Haslbeck JMB, Sjouwerman R, Peters ML. Towards a dynamic account of chronic pain. *Pain* 2022; 163:e1038-e1039.
7. Webster B, Verma S, Gatchel R. Relationship between early opioid prescribing for acute occupational low back pain and disability duration, medical costs, subsequent surgery and late opioid use. *Spine (Phila Pa 1976)* 2007; 32:2127-2132.