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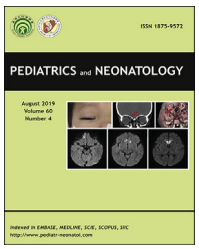

Letter to the Editor

# The analgesic effect of non-pharmacological interventions to reduce procedural pain in preterm neonates

*Dear Editor,*

Thank you very much for informing us about the comments for our study from the readers.[1,2] The first concern was that the infants included in our study were given the pain reducing treatments which were of no evidence- based and were already shown to be ineffective. Actually, most of the previous studies in this aspect were conducted in full-term babies or healthy preterms, and the preterms included were quite few. However, in this study, we chose sick premature neonates who were unable to breastfeed or receive skin-to-skin care; some of them received nasal prong continuous positive airway pressure or nasal intermittent positive pressure ventilation. Painful interventions are indicated more frequently in this group, and there are only a few studies in this aspect. Besides, most of the systemic reviews quoted by the commenter were published in 2017 or 2018, while the case collection in this study was from February to July 2015. Before this time period, most of the studies showed equivocal results. Other concerns from the commenter included that (i) a 20-30% glucose solution reduced pain during painful procedures, (ii) lower concentrations, including 10% glucose, were ineffective,[3] (iii) the efficacy of expressed breast milk for infant procedural pain relief was limited,[4] and (iv) the study was unethical as it exposed the babies to placebo or no intervention. The commenter also questioned the parental consent. For the preterm babies, especially the sick ones, the 20-30% glucose solution may cause necrotizing enterocolitis, which is a life-threatening disease. Therefore, we chose 10% glucose instead, and the results showed that it is partially effective, not really ineffective. The options of feeding in sick preterms are very limited, and breast milk is the best option. Therefore, it was included for trial, and the results showed that breast milk is the most effective in reducing pain. In the event of heel puncture, swaddling or containment was used to all infants regardless if they were fed with something or not. Since these physical maneuvers to relieve pain are routine procedures, we did not mention it in the paper. We really did not leave the control or placebo groups alone. We also obtained parental consents and gained their approval after explaining the procedure.

## Conflicts of interest

None declared.

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