Lidocaine wound infiltration with or without Ketorolac for episiotomy pain management: A randomized double-blinded controlled trial

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Introduction & Aim: Episiotomy is performed in almost all spontaneous vaginal deliveries in Thailand. It is known to cause moderate postpartum pain which has a negative effect on maternal quality of life. Lidocaine is used for relieving pain during the repair. Local anesthesia and NSAIDs such as Ketorolac are used together in many pain-relieving procedures with good results. The purpose of this study was to investigate the efficacy of Ketorolac and Lidocaine combination in pain reduction during episiotomy compared to Lidocaine alone.

Method: 240 healthy singletons parturient that underwent spontaneous vaginal delivery at the delivery room of Thammasat University Hospital were recruited. Participants were randomly assigned into two groups using systemic random sampling. The allocation was assigned into sealed envelopes. Half was Ketorolac group receiving 1% Lidocaine with 0.3% Ketorolac (10 ml consisted of 100 and 30 mg of Lidocaine and Ketorolac Tromethamine, respectively). Lidocaine group receive 1% Lidocaine. Primary outcomes were pain score assessed immediately after birth, after sutured, 2, 6 at 24 hours postpartum by Visual Analog Scale (VAS). Postpartum complications were evaluated for secondary outcome.

Results: No statistical difference in demographic data and clinical characteristics was found in both study and control groups. Mean VAS of the study group was statistically less than that of the control group after delivery (3.32 vs. 4.43; $p<0.001$), two hours (3.08 vs. 4.08; $p<0.001$) and six hours postpartum (2.52 vs. 3.63; $p<0.001$), respectively. Four cases in each group had postpartum hemorrhage. No case underwent peripartum hysterectomy.

Conclusion: Infiltration of Ketorolac with Lidocaine on episiotomy wound significantly reduced pain after perineal repair, two hours and six hours postpartum compared with Lidocaine alone. No statistically significant difference side effect and postpartum complication were reported in both groups.

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