

Association of Preoperative Pain Catastrophizing with Postoperative Pain after Lower Limb Trauma Surgery

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Abstract : Objectives: To evaluate an association between preoperative Nepali pain catastrophizing scale (N-PCS) scores and postoperative pain intensity and total opioid consumption. Methods: In this prospective cohort study we enrolled 135 patients with an American Society of Anaesthesiologists physical status I or II, aged between 18 and 65 years, and scheduled for surgery for lower-extremity fracture under spinal anaesthesia. Maximum postoperative pain reported during the 24 h was classified into two groups, no-mild pain group (Numeric rating scale [NRS] scores 1 to 3) and a moderate-severe pain group (NRS 4-10). The Spearman correlation coefficient was used to compare the association between the baseline N-PCS scores and outcome variables, i.e., the maximum NRS pain score and the total tramadol consumption within the first 24 h after surgery. Logistic regression models were used to identify the predictors for the intensity of postoperative pain. Results: As four patients violated the protocol, the data of 131 patients were analysed. Mean N-PCS scores reported by the moderate-severe pain group was 27.39 ± 9.50 compared to 18.64 ± 10 mean N-PCS scores by the no-mild pain group ($p < 0.001$). Preoperative PCS scores correlated positively with postoperative pain intensity ($r = 0.39$, [95% CI 0.23-0.52], $p < 0.001$) and total tramadol consumption ($r = 0.32$, [95% CI 0.16-0.47], $p < 0.001$). An increase in catastrophizing scores was associated with postoperative moderate-severe pain (odds ratio, 1.08 [95% confidence interval, 1.02-1.15], $p = 0.006$) after adjusting for gender, ethnicity and preoperative anxiety. Conclusion: Patients who reported higher pain catastrophizing preoperatively were at increased risk of experiencing moderate-severe postoperative pain.

Keywords : nepali, pain catastrophizing, postoperative pain, trauma

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