Service Priorities and Programmes

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Effectiveness of Oxycontin to Facilitate Rehabilitation for Patients Underwent Total Knee Replacement

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Introduction

Suboptimal pain management jeopardizes total knee replacement (TKR) patients' rehabilitation progress and imposes a negative impact with medical care. But, conventional modalities—Intravenous Patient-Controlled Analgesia (IVPCA) morphine with tramadol and paracetamol for them was inadequate, whereas opioids also induced adverse effects. A new pain regimen with combination of oxycontin and paracetamol was introduced to overcome these shortfalls.

Objectives

To compare the analgesic efficacy and related adverse effects of conventional and interventional treatments.

Methodology

A retrospective study to review pain severity and side effects of patients after TKR of one (conventional group) before and another (interventional group) after implementation of new regimen, between 1/1/2016 and 31/3/2017 those who have attended post-operation pain management class. Conventional group and interventional group both received IVPCA morphine and regular oral tramadol 50mg and paracetamol 1g since immediate post operation. Upon cessation of their IVPCA and before beginning rehabilitation program on Day 2, their pain and discomfort were recorded. On that day, conventional group continued oral tramadol and paracetamol but interventional group received oral oxycontin 5mg Q12H (instead of tramadol) and paracetamol 1gm Q6H. Both groups were followed up on Day 4 when rehabilitation had been started. Outcome measure (1) T test was used to compare pain severity on a numerical rating scale at rest (NRS-R) and on movement (NRS-M), p=<0.05 = significant different between two groups; (2) side effects of vomiting and dizziness.

Result

Reviewed conventional group (N=45) and interventional group (N=52). On Day 2, there was no significant difference on pain score between two groups at rest. But on Day 4, interventional group had significantly lower mean NRS-R than conventional group [[0.67 (SD 1.41) and 1.56 (SD 1.96) respectively, p=0.012] and NRS-M was

[5.09 (SD2.29) and 4 (SD 1.80) respectively, p=0.012]. The interventional group experienced much lesser vomiting from 21.2% to 1.9% and dizziness from 11.53% to 3.8% after switching to oxycontin. Conclusion: The proposed analgesic regimen provided good quality pain relief to facilitate patients' rehabilitation and reduced side effects to enhance patient comfort and hospital stay experience. Recommended to conduct further study to evaluate the cost and benefit of replacing IVPCA with this new regimen as it is more convenient and less labor intensive, whereas IV PCA requires equipment and maintenance costs and effort on medical staff for patients' care and supervision.