



**Service Priorities and Programmes
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A retrospective case control study on Acute Pain Management for patients with knee arthroplasty in United Christian Hospital 2012

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Introduction

This is part of an audit of the acute pain service for patients with knee arthroplasty United Christian Hospital (UCH) from January to December 2012.

Objectives

To compare Patient Control Nerve Block (PCNB) with the traditional Patient Control Epidural Analgesia (PCEA) and Patient Control Analgesia (PCA) as post operative pain control for knee arthroplasty. Primary outcome measurement: 1. The resting pain score at 0, 2, 4, 6, 8, 12, 24, 48 hours starting from discharge from the PACU 2. The average rated movement pain on the first three postoperative days. Secondary outcome measurement The incidence of side effects for the different modes of analgesia, other major postoperative complications, the operating theatre utilization time, the physical rehab score and the hospital discharge were also audited.

Methodology

This was a retrospective case control study. All PCNB patient in between 1st Jan to 31st Dec 2012 were defined as cases. For every identified PCNB cases, every next record of PCA and PCEA included would be selected as Control

Result

All together 93 patients (PCA n=22, PCEA n = 37, PCNB n=34) were included. The demographic data were similar between two groups. There was significant lesser resting pain in PCNB and PCEA group on discharge from PACU (0hr), 2hr, 4hr, 8hr and lesser movement pain on Day 1 as compared with PCA group. PCNB and PCEA group was associate significant lesser vomiting score (0.26 & 0.27 v.s. 0.86) than PCA group. There was no significant difference in other side effects, major complications, physical rehab score and hospital stay between groups. There was significant different in anaesthetic time between PCNB (38.18 mins), PCEA (27.59mins) and PCA (14 mins) and total OT occupying time was significant longer in PCNB group than PCA group (176 mins v.s. 145 mins). Conclusion: Audit result confirmed that PCNB had comparable pain relief with PCEA and even better than PCA. PCNB since its introduction become a well established acute pain relief modality for pain relief after primary knee arthroplasty in UCH. PCNB should be offered as suggested in the

international guideline as the first line acute pain relief modality after knee arthroplasty.