Prospective Audit on Patients' Satisfaction with Postoperative Analgaesia and Incidence of Side Effects of Intrathecal Morphine after Total Knee Arthroplasty.

R. Abd Rahim¹, G. Das Punshi¹, R. Sparks¹, V. Husarova¹.
Cappagh National Orthopaedic Hospital, Dublin, Ireland

Background and Aims:

Total knee arthroplasty (TKA) is associated with severe postoperative pain which delays recovery and prolongs hospital stay. There are many recovery protocols employed to improve the postoperative management of patients (pts) undergoing TKA. Spinal anaesthesia with intrathecal morphine is the most common anaesthetic technique for TKA in our institution. This provide excellent postoperative analgesia but may cause many adverse effects such as pruritus and post-operative nausea and vomiting (PONV). We sought to investigate the incidence of these adverse effects and also patients' satisfaction with the recovery and analgesia post TKA.

Methods:

We conducted 6 months prospective audit involving 100 patients (pts) who underwent TKA between September 2018 to February 2019. We documented basic characteristics of the patients (sex, age, ASA status, weight, height, BMI), dose of IT morphine, intraoperative analgesia, and antiemetics. On postoperative visit after obtaining informed consent patients filled Quality of Recovery 15 questions survey and average Overall Benefit of Analgesia Score (OBAS) and we asked visual analogue score , analgesic requirements, incidence and severity of pruritus and PONV in 24 hours postoperatively.

Table 1. Characteristics of Participants	
Sex n(%)	
Male	42 (42%)
Female	58 (%)
Age/years (Mean±SD)	66.5±9.7
ASA n(%)	
1	0 (0%)
2	57 (57%)
3	43 (43%)
Weight/kg (Mean±SD)	84.7±17.2
Height/cm (Mean±SD)	164.5±10.6
BMI (Mean±SD)	31.3±5.5

Table 2. Postoperative management	
IT Morphine/mcg (Mean±SD)	126±27
Gabapentin n(%)	84 (84%)
Paracetamol n(%)	100 (%)
Diclofenac n(%)	74 (74%)
Ibuprofen n(%)	13 (13%)
Oxynorm 24hrs/mg (Mean±SD)	43±19
Benefit of analgesia score (Mean±SD)(lower=better, Range 0-24)	2±2.8
QoR 15 Satisfaction score (Mean±SD) (higher=better, Max150)	113±24.8

The mean Overall Benefit of Analgesia Score (OBAS) was 2 ± 2.8. The mean QoR 15 Satisfaction score was 113±24.8. The overall pts' satisfaction with quality of postoperative recovery was rated as excellent in 84%. The incidence of PONV was 46% where 22 patients developed mild PONV treated by single anti-emetics, 18 pts suffered from moderate PONV treated with dual anti-emetics therapy. Six pts had severe PONV and 5 of them received triple anti-emetic therapy. Out of 19 pts who suffered from pruritus postoperatively only 11 pts with severe one required treatment.

Conclusions:

The incidence of post-operative nausea and vomiting is as high as 46%, which was previously reported. Despite this fact the overall pts' post operative satisfaction with the postoperative recovery including analgaesia was reported as excellent in 84%. Patients who experienced either pruritus or PONV tend to have a higher (worse) OBAS and a lower (worse) QoR-15 score.

Reference:

1) Sultan, P., Halpern, S. H., Pushpanathan, E., Patel, S., & Carvalho, B. (2016). The Effect of Intrathecal Morphine Dose on Outcomes after Elective Cesarean Delivery: A Meta-Analysis. *Anesthesia and Analgesia*. <https://doi.org/10.1213/ANE.0000000000001255>

2) Thay, Y. J., Goh, Q. Y., Han, R. N., Sultana, R., & Sng, B. L. (2018). Pruritus and postoperative nausea and vomiting after intrathecal morphine in spinal anaesthesia for caesarean section: *Proceedings of Singapore Healthcare*, 27(4), 251–255. <https://doi.org/10.1177/2010105818760340>