

An analysis of post-operative length of stay in primary total knee arthroplasty at Nottingham City Hospital

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Background

Enhanced recovery after surgery (ERAS) aims to reduce length of stay and improve patient outcomes with respect to cardiovascular and thromboembolic complications and post-operative delirium¹.

One facet of ERAS is the perioperative anaesthetic management. We aimed to look at factors which may be influencing length of stay and ability to achieve physiotherapy milestones in our centre.

Methods

Prospective data collection from all patients undergoing primary knee arthroplasty over a one month period.

Data included anaesthetic technique, post-operative pain scores and times to full mobilisation and hospital discharge.

We collected information on 52 cases,

- 50 were performed under spinal anaesthesia
- 25 of these were opioid free spinals

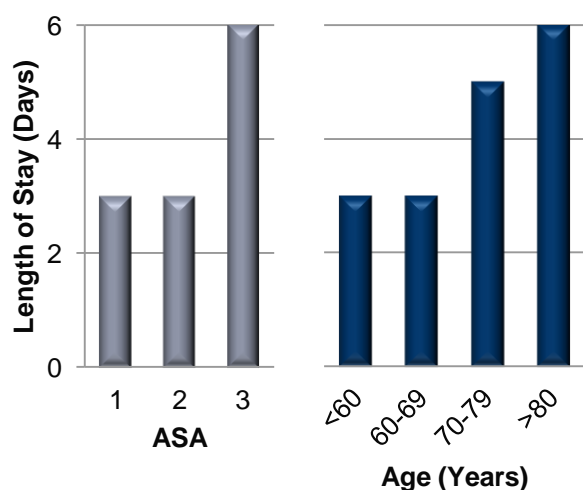


Figure 1 Factors affecting median length of stay

Results

Overall median length of stay was four days;

- 93% of patients were mobilised on the day after surgery
- 80% were discharged from physiotherapy by day four
- Age and ASA status had a positive correlation with increased length of stay, but anaesthetic technique did not.

Subgroup analysis of post-operative pain scores showed;

- Use of spinal opioids did not reduce maximal pain scores but these did occur later post op compared to opioid free techniques.
- Peripheral nerve blocks were associated with lower pain scores throughout their stay compared to local anaesthetic infiltration.

Anaesthetic Technique	Median length of stay (Days)
Spinal with opioid	3.5
Spinal without opioid	4.0
Nerve Blocks	4.5
Local Anaesthetic Infiltration	4.0

Table 1 Anaesthetic technique and length of stay

Conclusions

- Time to mobilisation is good with all anaesthetic techniques used
- Length of stay is predominantly linked to the patients' age and comorbidities

References

1. Aasvang EK, Luna IE, Kehlet H. Challenges in post discharge function and recovery: the case of fast-track hip and knee arthroplasty. *British Journal of Anaesthesia* 2015; Advance Access. published online July 25 2015