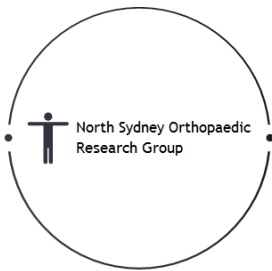


Opioid Use Before & After Hip and Knee Arthroplasty in an Australian Population

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Introduction:

The aim of this study was to determine the rate of opioid use before and after lower limb arthroplasty in an Australian population, and its association with outcome over 6 months.

Methods:

837 consecutive subjects who underwent primary elective hip (THA) or knee (TKA) arthroplasty under the care of the 7 investigating surgeons between May 2019 and August 2020 were prospectively enrolled. Before surgery patients completed a survey of patient reported outcome measures (PROMS, Oxford Knee or Hip Score, Knee or Hip Osteoarthritis Outcome Score, EQ5D) and questions regarding analgesic and opioid use within the previous 7 days. Patients returned for clinical review at 6 weeks with monitoring of pain, opioid use and complications. Subjects repeated PROMS and questions regarding opioid use at 6 months after surgery.

Results:

837 subjects met the study criteria. Data on opioid consumption was completed by 837 subjects (100%) preoperatively, 792 (95%) at 6 weeks and 709 subjects at 6 months (85%). The proportion of subjects reporting opioid use within the previous week at each review is shown in Figure 1.

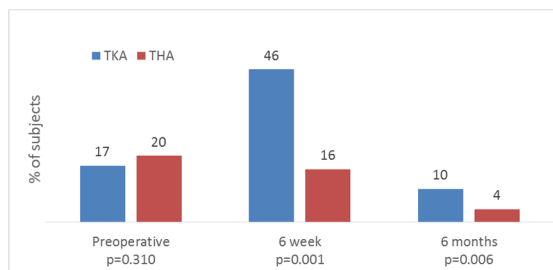


Figure 1: Narcotic use in TKA and THA subjects

Despite similar baseline rates of opioid consumption, after surgery opioid use in TKA subjects was >2.5 times higher than THA subjects at 6 weeks and 6 months after surgery.

Of those taking opioids before surgery 77% had ceased at 6 months after arthroplasty,

and only 3% of opioid naïve subjects reported opioid use at 6 months. Preoperative opioid use was associated with anxiety or depression (OR 2-4x), a lower Oxford Score in TKA (OR 10x), and female subjects in THA subjects (OR 2x).

Opioid use at 6 weeks was associated with preoperative opioid use (OR 3.1), visual analog pain scores more than 5 (OR 5-9x) and attending inpatient rehabilitation (OR 2x).

Opioid use at 6 months was associated with preoperative opioid use (OR 7-11x), and lower 6 month oxford scores (OR 4-9x).

Subjects who took opioids before arthroplasty had lower baseline scores for disease specific, anxiety or depression and general health. However they also experience a greater mean improvement after surgery in these scores to achieve equivalent outcomes to non opioid users at 6 months. High rates of satisfaction with surgery was reported by both opioid users at 93% and non opioid users at 90% (p=0.488)

Conclusions:

The rates of opioid use before and after arthroplasty surgery observed in this Australian population was considerably lower than those previously reported by international studies. Preoperative opioid use, anxiety, attendance at inpatient rehabilitation, and knee over hip surgery was associated with higher rates of opioid consumption at 6 weeks and 6 months after surgery. Preoperative opioid use was not associated with poorer postoperative outcome scores or lower satisfaction with surgery.

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