

Individualized Perioperative Pain Management of High-Dose Opioid Dependent Chronic Pain Patients Undergoing Elective Orthopedic Surgery

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Introduction

- Chronic pain affects 20% of the Danish population and 8% of these individuals consume opioids.
- There is currently a limited number of studies investigating the effect of an individualized pain treatment strategy and postoperative tapering of opioids in this vulnerable and often complex patient population.
- We evaluated the effects of an individualized perioperative pain management strategy in high-dose opioid dependent chronic pain patients undergoing elective, moderately painful orthopedic surgery.

Methods

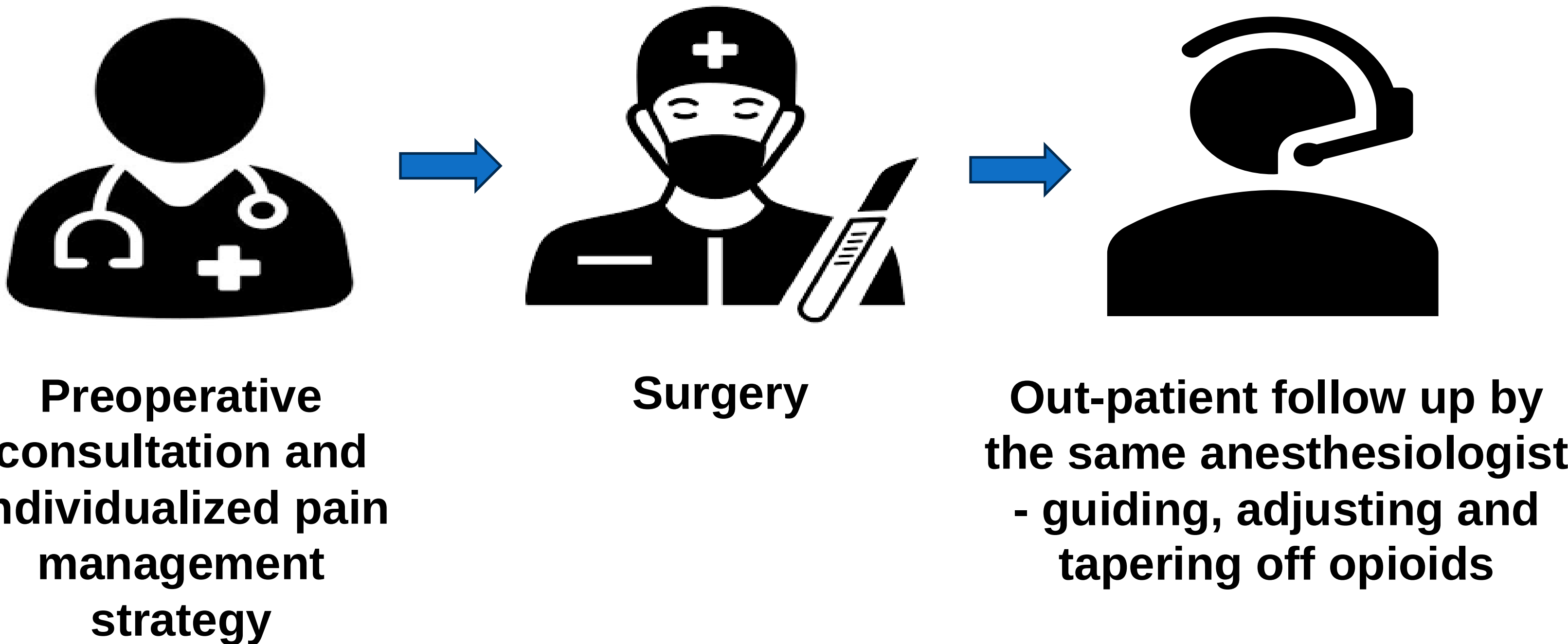
- This retrospective cohort study was conducted at Copenhagen University Hospital, Gentofte over the period 2022 – 2023.
- At our institution we perform approximately 6.500 orthopedic surgeries annually.

Criteria for patient referral to the Pain Clinic

- Patients > 18 years old
- Requiring > 80 mg of OME (oral morphine equivalents)
- Requiring methadone/suboxone for a previous opioid addiction
- Previous history of complicated postoperative pain treatment

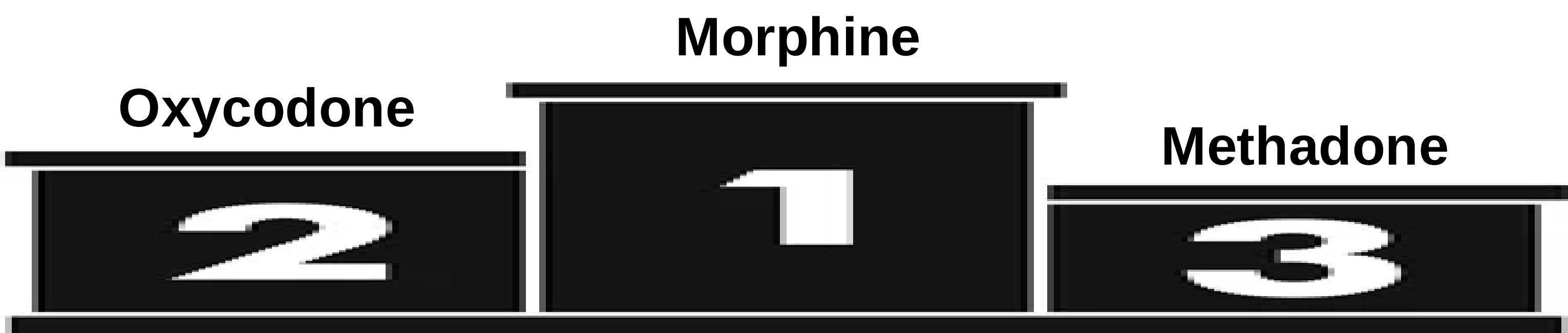
Pain management strategies included both non-pharmacological and pharmacological interventions such as:

- Pain education
- Neuropathic pain treatment
- Central and/or peripheral nerve blocks
- intraoperative methadone

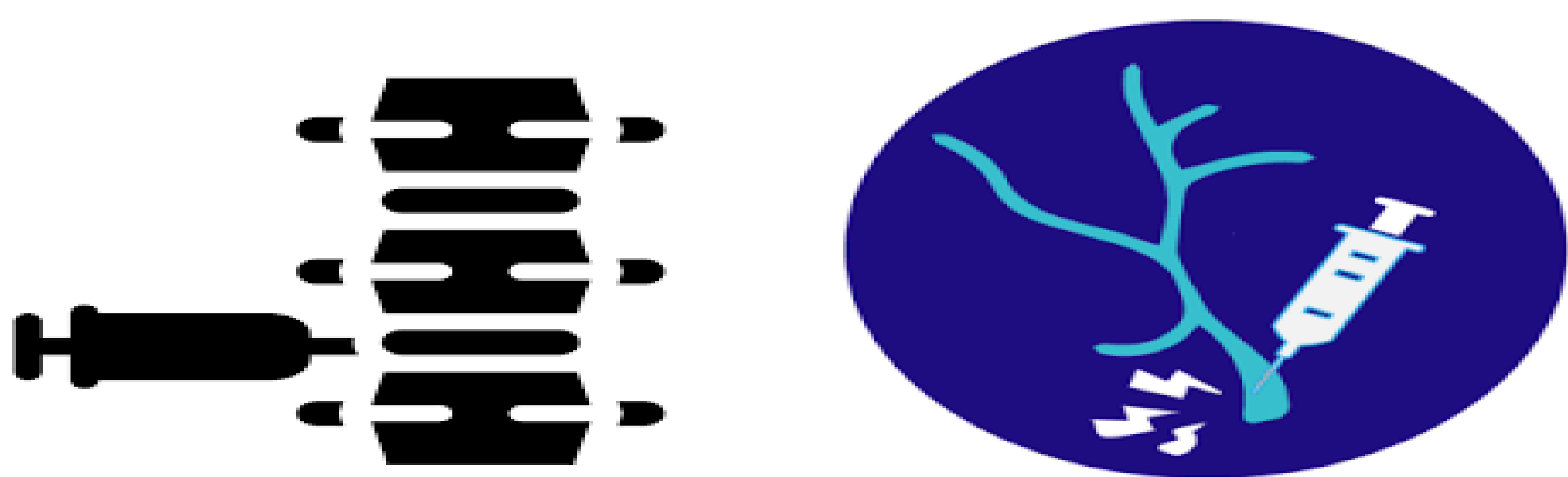


Results

- 66 patients followed the individualized pain management strategies.
- Median opioid consumption preoperatively was 95 mg (23 mg – 800 mg) of oral morphine equivalents.



Elective orthopedic surgeries	Number of patients
Total knee arthroplasty	30
Total hip arthroplasty	18
Shoulder arthroplasty	6
Upper limb surgeries	6
Revision total knee arthroplasty	6
Revision total hip arthroplasty	



- 83% of patients recieved a central and/or peripheral nerve block.
- Average time to start of postoperative opioid tapering was 13 days.
- Average time to return to preoperative opioid levels was 34 days.
- 23% of the patients fully tapered out of opioids under the guidance of the attending anesthesiologist.

Why is this important?

- Opioid dependent patients have poorer surgical outcomes, including increased chronic pain, higher postoperative opioid consumption, prolonged hospital stay, and higher rates of surgical revisions.
- This study highlights the importance of individualized pain management protocols in order to improve outcomes in this high-risk patient population.
- Further research is warranted to confirm our results and to optimize pain management strategies in the future.