

Opioid Use in Post Orthopaedic Surgery

Dr. Vaishnavi Devi C¹, Narmadha S², Neelufer Naz D³, Niveda S⁴, Parwin Banu M⁵, Priyadharshini A⁶

Abstract:- Usually surgeons will work extremely hard to manage the pain following orthopaedic surgery. While some discomforts is to be expected, the doctor has a number of choices at their disposal for managing and alleviating pain. Opioids, non-steroidal anti-inflammatory drugs (NSAIDs), and local anaesthetics are just a few of the medications that can help reduce pain. With the aid of medication, they may feel more at ease, which will enable to move around more rapidly, regain the strength more quickly, and recover from surgery more swiftly. Alternative therapies, such as medical hypnosis and acupuncture, are being employed more frequently as surgeons and their patients increasingly prefer these techniques to supplement conventional therapy due to worries about opiate addiction. The greatest option for pain management is frequently a mixed strategy. Opioids are still often used in TKR cases, underscoring the death of effective alternatives for treating OA pain. The goal of this study was to ascertain whether preoperative opioid use is linked to a higher likelihood of early TKA revision. One of the most urgent public health concerns in the USA is the opioid epidemic. Characterizing opioid prescription trends and risk factors is crucial because fractures are among the most frequent conditions that lead to a kid needing post-operative pain medication.

Keywords:- Opioids, Orthopaedic Surgery, Osteoarthritis.

I. BACKGROUND AND OBJECTIVE

The United States is in a prescription opioid crisis. Orthopaedic surgeons prescribe more opioid narcotics than any other surgical specialty. The purpose of this study was to evaluate the state of opioid use after extremity trauma in orthopaedic surgery. The United States is in a prescription opioid crisis. In 2015, 63% of 52,404 overdose deaths involved an opioid. Overdoses from methadone have decreased since 2008, but deaths due to synthetic opioids and heroin are still on the rise across many states. History of prescription opioid abuse is a strong risk factor for heroin use. An estimated two million Americans are addicted to prescription painkillers. Physicians need to play a role combating opioid addiction, especially additions that stem from prescriptions. The purpose of this systematic review was to evaluate current state of practice with regards to prescription of opioids in orthopaedic trauma surgery. Pain is a signal that should go away after surgery. We investigated whether opioid use could serve as a substitute for patient-reported pain and as a predictor of early surgical failure because patients' pain is normally managed pharmacologically. We specifically looked at whether the amount of opioids consumed in the year following was related to the probability of revision surgery after one and

five years. Few studies have examined the effect of preoperative opioid usage on risk of subsequent revision following primary total knee arthroplasty (TKA). The goal of this study was to ascertain whether preoperative opioid use is linked to a higher likelihood of early TKA revision. One of the most urgent public health concerns in the USA is the opioid epidemic. Characterizing opioid prescription trends and risk factors is crucial because fractures are among the most frequent conditions that lead to a kid needing post-operative pain medication. We postulated that a variety of risk factors for persistent opioid use could be discovered, and that a sizable fraction of paediatric patients getting opioids or developing persistent opioid use.

II. METHODS

Pragmatic veterans affairs primary care clinics were used as the recruitment site for a 12 month randomized trial with masked outcome assessment patients from June 2013 to December 2016. studied that investigated the use of opioids following orthopaedic trauma surgery were included. 1. evaluated opioids using a prescription drug databases 2. evaluates patient factors associated with post-operative opioid use despite using analgesics, eligible patients had moderate to severe chronic back pain or hip or knee osteoarthritis pain .out of 265 patients only 25 were withdrawn and 240 were randomized.

Large randomised trials comparing NSAIDs, opioids, paracetamol (acetaminophen), or placebo for the pharmacological therapy of osteoarthritis pain were taken into consideration. These studies involved individuals with knee or hip osteoarthritis. Only studies with a documented prevalence of osteoarthritis in the knee or hip were permitted to include individuals with other forms of arthritis or joints besides the knee or hip. Trials also had to include at least one follow-up assessment of pain or another algorithmic endpoint. Only trials with an average of 100 individuals randomly assigned to each arm were included in order to eliminate small study bias.

➤ Primary and Secondary Outcomes:

Assessment of trauma patients' knowledge of opioid usage was our main research goal. Suboxone/Subutex, common opioids, and adverse effects were the three terms we used to characterise comprehension. Consequences, signs of withdrawal, and suitable disposal techniques. Secondary outcomes included views about time to dependence, safety of combining over-the-counter (OTC) painkillers with opioids, comfort using naloxone, subjective pain level necessitating opioid usage, adverse consequences of opiates, and confidence in their ability to properly control opioid use. We also evaluated people's perceptions of addiction (whether they feel that they or others can get

addicted), with a discrepancy meaning that they believe others but not themselves can become addicted.

III. RESULT

Prospective randomised controlled study, out of 36 patients, 18 in each group was observed with the pre operative brachial plexus blockade and general anaesthesia in distal radius fracture, In this patient pain become worsen at 12 hours compared to general anaesthesia. Post operatively there were no differences in outcomes.

Paediatric fractures are more common which requires operative treatment. In this condition, opioids are intended to the paediatric patient, in which many patient may represents a primary exposure to the opioid drugs, hence negative consequences of opioids related adverse events, medication error are subsequently at high risks.

Thus it is important for orthopaedic surgeons to understand the detrimental effects of opioid abuse on individual and society, to recognize objective measures to identify patients at risk for non-therapeutic opioid use.

Patients were grouped according to the presence of preoperative opioid consent. By using Advanced practice providers. The discharge prescribing was done in a great proportion. Significantly proportion of the patients was decreased in prescribed opioids in consent group. Dispensed doses of opioids were apparently changed. The mean value of the tablets and liquid doses prescribed are 35.37 and 29.10, i.e., tablet ($p < 0.005$) and liquid (0.005). In both the formulations, the downward trend has been seen.

Annually an abuse of opioids has been growing which concludes in disastrous consequences. Hence an immediate need for the government, various institutions and every health care professional prevent this crisis by various means, but limitations of opioid use after orthopaedics surgical procedure on world-wide is highly noticed.

IV. CONCLUSION

Before arthroplasty, one in five people opioids were used. The biggest risk factor for opioid usage at 6 months was pre-operative opioid use, which increased the risks 7-15 times. In the opioid native (5% TKA and 1% THA), prolonged opioids over time are comparable in cases and controls. Opioids are still often used in TKR cases, underscoring the death of effective alternatives for treating OA pain.

REFERENCES

- [1]. Maria C.S., Inacio et al. Opioid use after total hip arthroplasty surgery associated with revision surgery. Inacio et al. BMC Musculoskeletal disorders. 10 March 2016. 1. Nicholas A., David et al. Preoperative Opioid Use and its Association with Early Revision of Total Knee Arthroplasty. The Journal of Anaesthesia, 2018 November 33(11), 3520-352
- [2]. Haoyan Zhong, Hannah et al. Persistent Opioid use after surgical treatment of paediatric fracture. British Journal of Anaesthesia, 2021 June 126(6), 1192- 1199.
- [3]. Rikki M. Koehler, Ugochic et al. A systematic review of opioid use after extremity trauma in orthopaedic surgery. International journal of the care of the injured. 3 June 2018; 49(6): 1003-1007
- [4]. Erin E. Krebs, Amy Gravely et al. Effect of opioid vs non opioid medications on pain related function patient with chronic back pain or hip or knee osteoarthritis pain. JAMA. 6 March 2018 ; 319(9): 872-882.
- [5]. Bruno R da Costa, Tiago V Pereira, et al. Effectiveness and safety of non steroidal anti-inflammatory drugs and opioid treatment for knee and hip osteoarthritis. The BMJ. 12 Oct 2021 ; 375: 2321.
- [6]. Amy L. Xu¹, Alexandar et al. Patient understanding regarding opioid use in an orthopaedic trauma surgery population ; a survey study. Journal of orthopaedic surgery and research. 2021 16: 736.
- [7]. Maureen K. Dwyer, Catherine M. Tumpowsky et al. Primary Arthroplasty. The Journal of Arthroplasty. 15 Oct 2017; 33(4): 668-672
- [8]. Morris, Brent J. MD Mir, Hasan R et al. The Opioid Epidemic Impact On Orthopaedic Surgery. Journal of the American Academy Of Orthopaedic Surgeon. May 2015; 23(5): 267-271.
- [9]. Brendan A. Williams, MD, Lacey C. Magee, MD, et al. Preoperative Opioid Informed Consent and Prescribing Practices in Children Undergoing Orthopaedic Trauma Surgery. Journal of the American Academy of Orthopaedic Surgeon. 24 Jan 2022; 6(1): e21.00309
- [10]. Shuai Zhao, Fan Chen, et al. Risk Factors and Prevention Strategies for Post-Operative Opioid Abuse. Pain Research and Management. Jul 2019; 6(1).
- [11]. Anish K. Agarwal, Daniel Lee; et al. Patient Reported Opioid Consumption and Pain Intensity After Common Orthopaedic and Urologic Surgical Procedures With Use of an Automated Text Messaging System. JAMA NetW Open. 2021; 4(3): e213243.