Abstract title: “Postoperative pain after total knee replacement. Do we really know which non-steroidal anti-inflammatory drugs to use?”

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**ABSTRACT**

*Background*
Postoperative pain after total knee arthroplasty is a major concern for both doctors and patients undergoing the procedure, as it is difficult to control and is often quite extreme. Currently, a mixture of NSAIDs and opioids is used in order to alleviate the pain, however it is still not known which NSAIDs are the most effective in terms of pain management and side-effects control.

*Aim and objective*
Aim and objective of this study is to search, identify, review and critically appraise the existing articles, relevant to the chosen topic.

*Methods*
Study was designed as a systematic review, focusing on the usage of NSAIDs in order to manage postoperative pain in patients after total knee replacement.
The online databases (PubMed and Scopus) were searched and the articles that satisfy the inclusion criteria – i.e. specific procedure – total knee arthroplasty; specific type of pain - postoperative pain; NSAIDs usage as the main type of analgesia; as well as others – were identified. The exclusion criteria were then applied in order to make the search more specific – i.e. different type of analgesia; non-human species; full text not available online etc.
We then critically appraised the articles using PRISMA statement and CASP checklists. We then summarised and compared the obtained results between each other.

*Results*
Overall, 5 articles were identified to be relevant to this study, satisfying the set criteria. The authors suggest to look at the levels of pain intensity and incidence of opioid-related side-effects (discussed in each paper) as an outcome measure for each paper reviewed.

*Discussion*
The review has established that different NSAIDs in combination with opioids provide different pain control, whilst not necessarily sparing opioid-related side effects. In fact, it is difficult to say which NSAID out of five reviewed could be identified as the most-effective, however the evidence shows that lornoxicam (discussed in the paper by Inan N, Ozcan N, Takmaz SA, Ozcan A, et al) improves both pain intensity and opioid-related side effects in postoperative pain after total knee arthroplasty

*Conclusion*
The gap in the knowledge discussed in this systematic review requires further studies and research to be carried out in order to identify the most effective NSAIDs to use in clinical practice. In addition to that, it could be suggested that lornoxicam has a potential for further research as it “ticks” both boxes of the outcome measures suggested in this review.