Reviewer’s report

Title: Low risk for opioid tolerance after skeletal trauma: long-term follow-up of opioid use in patients with tibial shaft fractures

Version: 1
Date: 19 October 2013
Reviewer: Dagmar Westerling

Reviewer’s report:

There is a discrepancy between what is actually found in the study, the title and the conclusion. The authors should, in a revised version, focus on what the data show.

Prescription of potent opioids neither equals consumption of opioids by the patient nor optimal pain relief following tibial fractures. Patients may stop taking opioids for many reasons. Patients may be given less potent opioids by their GP, who may be reluctant to prescribe potent opioids long-term.

The authors should mention the lack of proof of efficacy for long term opioid treatment following tibial shaft fractures, since apart from opioid side effects, a further common reason for stopping opioid therapy is lack of analgesic effect.

Major Compulsory Revisions:

1. This study shows that following tibial shaft fractures, prescribed opioid doses do not increase during long term follow up. The study does not show that there is a low risk of opioid tolerance after skeletal trauma, as only one single type of fracture is investigated in the present manuscript. If, for instance, vertebral compression fractures in elderly, often female patients or vertebral fractures caused by motor vehicle accidents in patients of all ages, were studied, the long-term opioid prescription may be quite different.

The title should be changed accordingly.

2. The authors mention only one limitation of the present study: data on prescribed, not consumed, opioids, are presented.

A further limitation of the study is: we do not know anything about the efficacy of the analgesic treatment. Lack of analgesic effect and/or side effects of opioids are major reasons why opioid therapy is stopped (Noble et al 2010). Patients may also, after some time, be prescribed less potent opioids by their GP, who may be reluctant to provide potent opioids for noncancer pain.

3. P12, Conclusion: “We did not see any major increased development of tolerance over time…” The study shows that there was not an increase of prescribed doses of opioids and that higher dosages were decreased during follow up. As the authors point out in the discussion on p11, line 9-10, it is not known if the prescribed opioids were consumed or not. We also do not know if the excluded patients, who were already taking opioids prior to their fracture and
were excluded, increased their opioid use following the accident.

Minor Essential Revisions:

1. In the Background section, p 4, the first line should be omitted as it is a generalized opinion that is not referenced. Patients who do well on opioids do, to my knowledge and experience, not often think that their consumption of opioids is a concern.

2. P.4 line 2-4. The references 1-6 report on use of opioids, not exclusively on use of morphine. Please change morpine into opioids.

3. P. 6 line 6-7. “Weak” and “strong” opioids should be changed into less potent and potent opioids, respectively.

4. P. 8 line 1 “indentified” should be identified.

5. P. 9 line 8 “morphine analgetic use” should be changed into opioid analgesic use since all patients were not treated with morphine.

6. P. 10 first line. Reference the first sentence or omit it.

7. P.10 line 6, “We excluded all patients with morphine prescriptions.” should be changed into “We excluded all patients with opioid prescriptions”, if not the excluded patients were all treated with morphine? Were patients treated with less potent opioids like codeine or tramadol prior to the fracture also excluded? Please clarify.

8. P. 10 line 15, “our findings of a morphine use of 3 %...” should be “our findings of a opioid use of 3 %...”, or were all excluded patients taking morphine?

9. P. 11, line 9-10, “opioids dispensed to patients is not always equivalent to morphine consumption”. Morphine should be changed to opioid or omitted. See comments 2, 5, 7 and 8.

Reference


**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests