Reviewer's report

Title: The Efficacy and Safety of Lanthanum Carbonate on Chronic Kidney Disease Mineral and Bone Disorder in Patients with Dialysis: A Systematic Review

Version: 1 Date: 2 June 2013

Reviewer: Bjorn Meijers

Reviewer's report:

Review Lanthanum carbonate

In the manuscript entitled “The efficacy and safety of lanthanum carbonate on CKD MBD in patients with dialysis” by Zhang et al, a systematic review and meta-analysis was performed to evaluate the efficacy/safety of lanthanum carbonate in patients with ESRD. It is a nicely conducted systematic review addressing all relevant aspects and current evidence of treatment of lanthanum carbonate in dialysis patients. Unfortunately, as the authors point out, there still is a lack of well-powered studies evaluating the effect of lanthanum carbonate (but also other phosphate binders) on hard outcomes as mortality and cardiovascular disease, making firm conclusions about these aspects impossible.

Major compulsory revisions

Consider including the following manuscripts for systematic review. If the authors decide not to include these, please argue why not to include it.

Xu et al. BMC Nephrology 2013
Kasai Ther Apher Dial 2012

Minor Essential Revisions

Significant review of English grammar and spelling is warranted. Please find a non-exhaustive list below:

Title: “patients with dialysis”, please change into “dialysis patients or patients on dialysis”.

Abstract:
- Background: first sentence is redundant
- Methods: Avoid abbreviation without first mentioning the full descriptive term (RCT : randomized controlled trial)
- Results: “with 3142 pt”, please change into “with a total of 3142 pt”.
  *Statistical instead of statistics
  *Limited number of trials instead of limited trials
  *Superiority instead of priority
  *Appeared to have a higher instead of appeared a higher
- Conclusions: *good instead of well efficacy (see also 2nd paragraph background main body)
  *Except for instead of except

Background:
- First paragraph: *suffered instead of were suffered
*Increasing evidence showed “that”…
- Second paragraph last sentence: making it instead of makes it
- Third paragraph last sentence: leave in (changing bone morphology)
- Last paragraph: mainly focusing instead of focused

Methods:
- General remark: use uniform verb tenses (e.g., search strategy: …who discarded studies that are not applicable…will be retained)
- Interventions: routine treatment: was use of calcimimetics allowed, did all studies include dietary phosphate restriction in the routine treatment?
- Primary outcome: CV events: please specify
- Secondary outcomes: please specify “control rate of serum P” (percentage of patients with P below ULN?, …?)
- Results: *search result: inconformity, change into for example none of them met…
  *please leave “Error! Bookmark not defined”
*study quality: random instead of randomly
*effect on all-cause mortality: patients using instead of use
no significant instead of not a
*effect on CV events: experienced at least one instead of appeared once
*effect on vessel calcification: no trials instead of trails
*bone disorder: compared in 8 other instead of other 8 people who were treated instead of treated

ROD: Avoid abbreviation without first mentioning full term (renal osteodystrophy)
- Discussion:
*the description of the association between lanthanum and lower rate of intradialytic hypotension is too extensive and hypothetical.
*last sentence: evaluating instead of evaluates
*p17: while Spasovski, please change into, In contrast, Spasovski…
*p18: to better detect instead of detecting
*p18: as the evalution of diarrhea…it may vary with individual. This sentence is redundant, please leave it.

Table 1:
- The outline must be more uniform (e.g., use brackets for all descriptions or for none of them)
- Placebo # placebo

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

**Quality of written English:** Not suitable for publication unless extensively edited

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests