Reviewer's report

Title: Platelet-Rich Plasma vs Hyaluronic Acid to treat knee degenerative pathology: study design and preliminary results of a randomized controlled trial.

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Reviewer: Michiel Mulier

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Platelet-rich plasma vs hyaluronic acid to treat knee degenerative pathology: a randomized controlled trial.

General considerations:
- Discussion: the most of the written text is about the evidence of the efficacy of PRP reported in other studies and not about the results reported in this study. This is because these preliminary results do not show any statistical evidence. In the end they only report the results of a case series of patients treated with PRP. They also do not refer to the second treatment of choice (HA) and do not refer to the evidence of the efficacy of HA as reported lately in two different meta-analysis (HA in the treatment of knee OA). Also in the introduction they do not mention this.
- The reference list is not accurate. The numbers stated in the text do not match with these in the reference list (see the last ones).
- The conclusion of this study is surprisingly and I think incorrect. See discussion part.
- It would be better to wait for the last 85 patients to be included before publishing these data. They do not have any hard evidence that one of the treatments had a better efficacy and they also are not able to say that these treatments are both equal in efficacy.

Material and methods:
- They included patients with imaging findings of degenerative changes of the joint. However, Kellgren and Lawrence grade 0 does not show degenerative signs at X-ray.
- How was the randomization process been performed. They do not mention this.
- The brand of HA is not clear. They do not mention this. Only the molecular weight is clear (1500 kDa).
- I think the MCID of 6.7 is very low. In other studies using the VAS and Harris hip Score, minimal clinically important differences of more than 16 are calculated. Maybe they could explain this a little bit better in the text.

Results:
- I think it is hard to report minor adverse effects when the first visit in the outpatient clinic is only after 2 months. You cannot rely on patients’ answers after
this time. Why did they not include a diary?

- How can they prove that the minor adverse effects do not compromise the overall outcome?

- It is not common to write about trends and tendency in the results part of the article. Even in the discussion it is a little bit strange. You do have evidence of the efficacy of a treatment or you do not.

- In the literature (I think) there are no reports of intolerance to components of HA. Only complaints about pain due to the injection of HA are reported. These complaints disappear normally within a week and are most of the times due to extra-articular injection of HA. This is another problem of this study: there is no evidence that the injected PRP or HA was in all cases intra-articular. I think in a study setting it is important to be sure that the injected products are intra-articular.

Discussion:

- See general considerations.

- They write that in the study of Gobbi there is an increase of the KOOS, IKDC and Tegner: these are all good results. However they also write that the VAS for pain increased: this means that the results are worse considering pain. I think they made a mistake.

- They performed a RCT however in the discussion they report the efficacy as if there was performed a cohort series (PRP only).

- They conclude writing that there is no difference in efficacy in the treatment with HA and PRP, but surprisingly they suddenly they advise that the application of PRP should be limited to patients with earlier degrees of knee OA. It is clear that the efficacy of PRP is better in this group than in the more severe affected group, but still there is no statistical and clinical difference between the two treatment groups. They also write in the introduction that PRP is much cheaper than HA (PRP is a low-cost treatment) as a treatment. Why do they not mention this in the discussion?

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