Reviewer’s report

Title: Successful long-term remission through tapering tocilizumab infusions: a single-center prospective study

Version: 0 Date: 19 Sep 2019

Reviewer: Simone Baldovino

Reviewer's report:

In this study, the Authors describe an exploratory, prospective single-centre open-label study on progressive tapering of Tocilizumab in patients affected by rheumatoid arthritis (RA) who reached a sustained remission of at least three months.

MAJOR ISSUES:

- This study analyzes only 13 patients; even if the Authors claim that it is only an exploratory study this number is quite small for a common disease like RA;

- There are at least two studies (Bouman CAM, Tweehuysen L, Haverkort D, van den Ende CH, van der Maas A, den Broeder AA. Abatacept and tocilizumab tapering in rheumatoid arthritis patients: results of SONATA-a retrospective, exploratory cohort study. Rheumatol Adv Pract. 2018 Apr 12;2(1) and Saiki O, Uda H. Successful extension of tocilizumab infusion intervals from 4 weeks to 6 or 5 weeks in 90% of RA patients with good response to 4-week intervals. Clin Exp Rheumatol. 2017 Jul-Aug;35(4):666-670.) that analyze the possible reduction of the Tocilizumab dose or the extension of the infusion interval.

- The absence of significativity in many comparisons between patients with successful long term maintenance and patient with secondary failure is probably due to the low number of the patients recruited. For example, the disease duration, and the previous number of sDMARDs appears higher in patients with secondary failure than in patients with successful long term maintenance; the Authors could recruit a higher number of patients to better understand these possible associations.

- At the lines 327-330, the Authors claim that "The risk of relapse could likely be reduced by slowly tapering infusions. Indeed, the relatively quick tapering may be responsible of some relapses observed." However, in the Paper, there is not any evidence supporting these claims.
MINOR ISSUES

- The Authors could use a multivariate analysis instead of comparisons of single variables to analyze the predictors of remission maintenance or flare after tapering.

- It is essential to know the type of previous drugs used to treat the patients and not only their number (line 153-154); for example, would be useful to know if the patients were treated with anti-TNF agents or with anti CD20 because the type of previous therapies could correlate with the success of long term maintenance after the extension of dose interval.

- A native English speaker must correct the Paper.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.
No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.
No

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